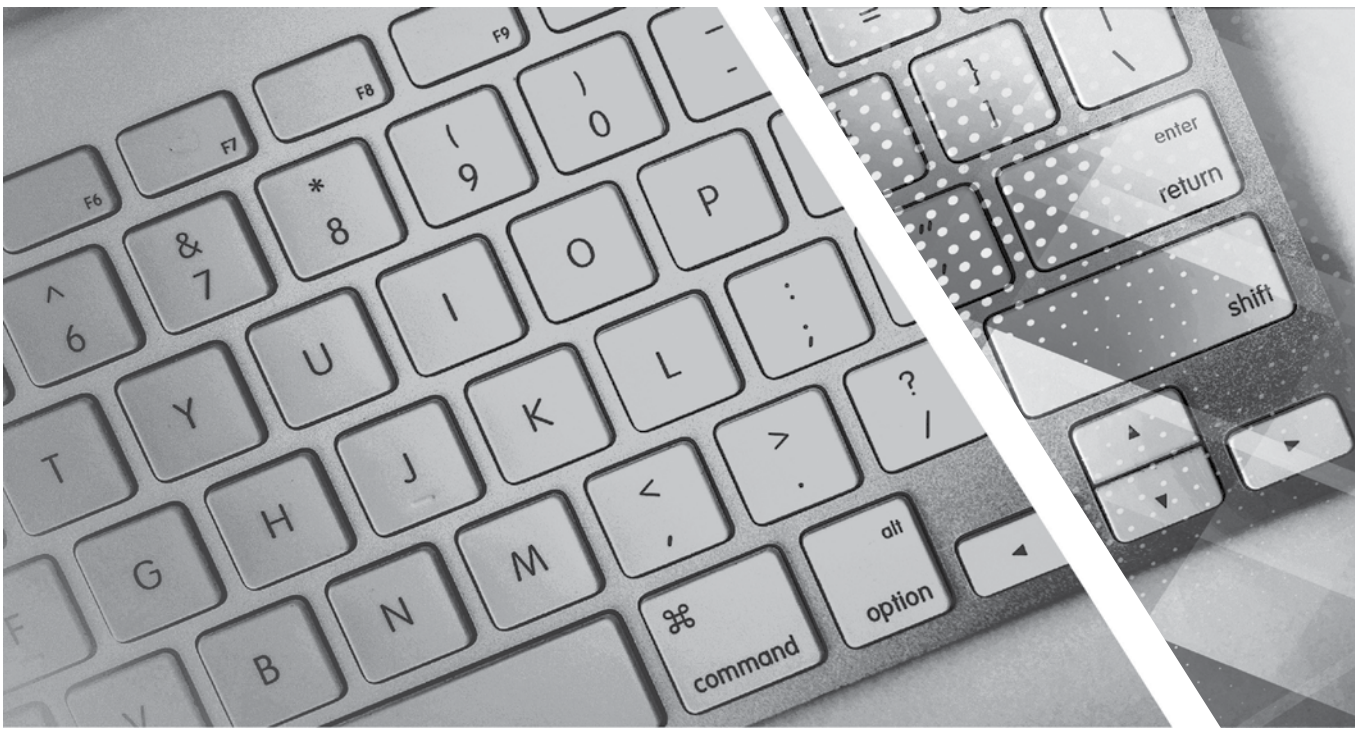
3

KEYBOARD

Computer Science With Application Software

THIRD EDITION



TEACHING GUIDE

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About the Series

The computer in present-day society is an indispensable tool facilitating communication and work. From huge machines weighing several tons, the computer has evolved into light, sleek yet powerful tools that dominate today's knowledge society. Many previously complex and time-consuming tasks have been reduced to the mere touch of a few buttons on the keyboard. Basic computing skills like word processing are an essential requirement in today's job market. The Internet has revolutionised the way people communicate and interact. Geographical distances are no longer a constraint for effective business transactions, information dissemination, and interpersonal interactions, as distances have been overcome through extensive, intricately-designed communication networks.

Today computer science is an academic subject in its own right, governed by scientific and mathematical principles. It is an integral part of what is commonly called STEM (Science, Technology, Engineering, and Mathematics). Due to its increasing importance, computer classes have become an essential part of the education curriculum around the world.

However, the trend has been to favour Information and Communication Technology (ICT) rather than the science behind computers. ICT in schools usually focuses only on teaching how to use office productivity software, such as, word processors, presentation software, and spreadsheets. We, as teachers, should be careful that we teach not only ICT, but also computing, especially in the lower classes. This is an important distinction because ICT primarily involves simply understanding and memorising commands. As a consequence many students may get the impression that there is not much of creativity involved in using computers. This may possibly result in students losing interest in what they mistakenly believe to be computing. Students are not introduced to how computers work and are not provided with the opportunity to be creative through computing activities that challenge them to use their logical and analytical abilities along with being creative.

Computer science education should be such that children later on, if they choose to do so, would be capable of making a meaningful contribution either to further advance our digital society or use digital media optimally in their chosen field of study or work. Computer education in schools should equip every child with the basic understanding of how computers work and with the possibilities of information technology in a knowledge-based society and economy. This has been the rationale for developing this third edition of the **Keyboard** series—***Keyboard: Computer Science with Application Software***

KEYBOARD: COMPUTER SCIENCE WITH APPLICATION SOFTWARE

Keyboard: Computer Science with application Software, third edition, a series of eight books for Classes 1 to 8, is a comprehensively revised edition of ***Keyboard: Computer Science with application Software***, second edition, and carries forward the very same interesting and interactive approach that is a hallmark of the existing edition. The series aims to make the study of computer science engaging and interactive for students through a combination of interesting features.

The contents are based on the most recent feedback from teachers and incorporate the latest trends in computer education. We have taken particular care to update facts and figures, and to include the latest advancements in the field of information and communication technology. Thus, trendsetting topics such as social networking and cloud computing have been explained along with devices such as smartphones and tablets. Also, in keeping with the times, there is greater focus on animation and web-designing concepts.

The series introduces the subject in a language that is simple and direct. Technical jargon is used only where necessary and all such terms are defined at the end of each chapter. Comic strips, icons, cartoon characters, and illustrations make the learning process an enjoyable experience.

Keyboard: Computer Science with Application Software is an advanced course in computer science meant for those schools that wish to teach creative application software, such as **Flash**, **HTML**, **Photoshop**, and **Dreamweaver**, along with the basic concepts of computers, computer programming, and the Internet. In keeping with the times it also introduces students to sound (**Audacity**) and video-editing **(Lightworks**) software.

COURSE FEATURES AND HIGHLIGHTS

Each chapter in ***Keyboard: Computer Science with Application Software*** starts with an engaging introduction in comic strip format presenting a conversation between two characters, **Goggle** and **Toggle**. Goggle represents an average primary and middle school student, while Toggle is an animated laptop and an expert in computer science. Toggle helps Goggle understand all that is taught about computers and computer software in the series. The series has a hands-on approach to learning with text supported by relevant screenshots, and plenty of practical exercises. The MS Office screenshots are based on **MS Office 2013**, with the compact and user-friendly **Windows 7** as the operating system.

Practice Time, Exercises, In the Lab, and Group Project

Practice Time is a feature that has been a part of all the computer science series we have written, and it has been found by teachers to be a very useful feature. We continue with it in ***Keyboard: Computer Science with Application Software*** also. The feature provides practical exercises after every major topic, in which the student applies the concept(s) learnt in the previous section to solve a practical problem. The detailed solution is given after the question, so that students are able to understand the practical application of a particular concept on their own. This frees the teacher from the process of trying to individually assess whether all the students have properly grasped the concept.

The **Exercises** and **In the Lab** questions in the series deserve particular mention. as they have been developed according to Bloom's Taxonomy. The exercises in each chapter have sufficient theoretical and practical questions for concept application.

Application-Based Questions is a special analytical section within Exercises, aimed at encouraging students to evaluate a picture or a situation, and answer questions based on them.

The **In the Lab** questions are similar to those under **Practice Time** except that the solutions are not given. The questions too are more complex than those found under **Practice Time**. In both, however, the questions describe

a variety of situations across subjects. Thus, both attempt to integrate the use of computers with problem-solving in other subjects.

Group Projects encourage the students to work in collaboration with their peers and implement what they learnt in the lessons.

Worksheets and Assessment Papers

Worksheets have been introduced in Classes I to V, while for Classes VI to VIII **Assessment** and **Comprehensive Assessment** papers have been included.

Teaching Resources

The teacher's resources for the *Keyboard: Computer Science with Application Software*, series have two components: (a) Teaching Guides and (b) Teacher's Digital Resources.

Teaching Guides

The Teaching Guides accompanying each of the coursebooks is carefully structured to provide useful support to teachers.

Each Teaching guide contains the following:

- A **Lesson Plan** that details the periods recommended for a particular chapter, the topics therein, the expected learning outcomes at the end of each topic, and the digital support available for each chapter. This is intended to assist teachers in respect of overall planning. Teachers may go through the lesson plan before stepping into the class or may use the recommendations for creating their own.
- A set of **chapter-wise Worksheets** follows the lesson plans, and has questions in the form of Crossword Puzzles, Word Searches, Jumbled Words, etc. designed to reinforce conceptual understanding.
- In addition to the **Worksheets**, a set of **chapter-wise test papers** has also been provided, which may be used by teachers to create their own assessment papers, or may be used as they are for classroom tests.
- The complete **Answer Key** to the Coursebook Exercises has been given in the teaching guide, including that for the In the Lab questions, Group Project, Worksheets/Assessment papers, Revision Questions, and the Cyber Olympiad Questions.

Digital Resources

The teacher's digital support for the series is accompained by a **Test Generator**.

This comprehensive and easy-to-use **Test Generator** is an effective assessment tool designed to benefit teachers by enabling them to create a variety of test papers.

It has two sections: (a) Coursebook questions (b) Questions beyond the coursebook.

Both include an extensive pool of questions, such as multiple choice, true or false, fill in the blanks, short answer, and long answer questions, as well as lab exercises wherever relevant. Answers have been provided to enable efficient and effective evaluation. The **Test Generator** allows the teacher to create test papers for one or more chapters, with a mix of questions from both the sections. The Student's Books, and the accompanying Teaching Guides and teacher's digital support, together form a complete package enabling one to teach the subject effectively.

Continuous and Comprehensive Evaluation

Learning takes place in a variety of ways — through experience, making and doing things, experi-mentation, reading, discussion, asking, listening, thinking and reflecting, and expressing oneself in speech, movement or writing. All these modes of learning are possible both individually and in groups. It would thus be advantageous for children to be given the opportunity to involve themselves in as many of these activities as possible.

CONTINUOUS AND COMPREHENSIVE EVALUATION (CCE)

The primary objectives of this system are (1) to maintain continuity in evaluation and (2) to reliably assess broad-based learning and behavioural outcomes.

In this system the term 'continuous' is meant to emphasize that evaluation of a student's progress is a continuous process rather than an event. It is spread over the entire span of an academic session, and means regularity of assessment and unit-testing. It also includes a diagnosis of learning gaps, the use of corrective measures, retesting, as well as self-evaluation.

The term 'comprehensive' suggests that the system should cover both scholastic and co-scholastic aspects of a student's growth and development.

This system expects assessment to be both **formative** and **summative**. Formative assessment is a tool used by the teacher to continuously monitor student progress in a supportive environment. It involves regular descriptive feedback, a chance for the student to reflect on the performance, take advice and improve upon it. If used effectively it can improve student performance tremendously.

Summative assessment is carried out at the end of a course of learning. It measures or 'sums-up' how much a student has learned from the course. It is usually a graded test, i.e., it is marked according to a scale or set of grades.

It has been found that assessment that is predominantly of a summative nature will not by itself be able to yield a valid measure of the growth and development of the child. It, at best, certifies the level of achievement only at a given point of time.

The paper-pencil tests are basically a one-time mode of assessment and to exclusively rely on it to decide about the development of a child is both unfair and unscientific. Over-emphasis on examination marks makes children assume that assessment is different from learning. Besides encouraging unhealthy competition, the reliance on a summative assessment system also results in great stress and anxiety among learners.

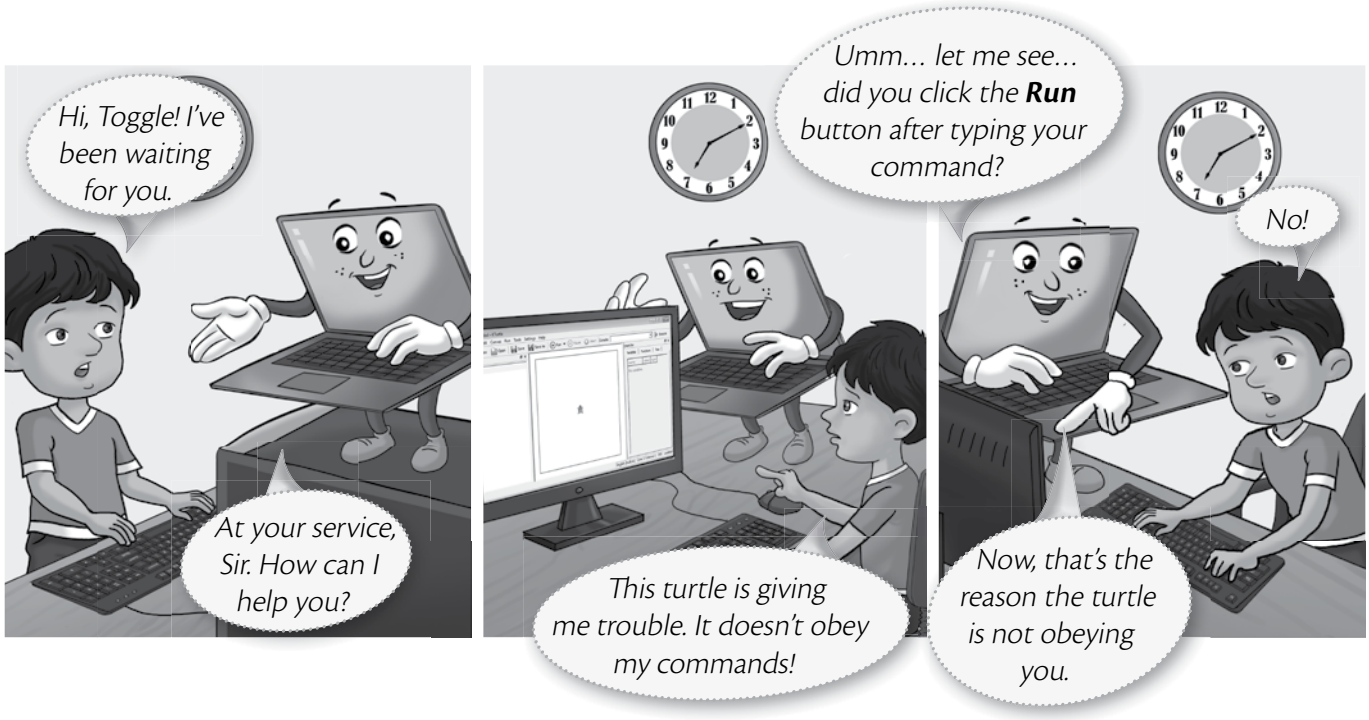
The ***Keyboard: Computer Science with Application Software,*** series, comprising of **Student's Books, Teaching Guides,** and **Digital Resources,** has a number of features that aid both continuous and comprehensive evaluation.

CONTINUOUS EVALUATION

Coursebooks

Beginning of Instruction (Formative Assessment)

- The introductory dialogue at the beginning of each chapter between Goggle and Toggle is a starter to the chapter topic and can be employed to test the prior knowledge of students by using the dialogue to ask for possible solutions or an answer to Goggle's question. For example, in the following dialogue you can also ask them what is the alternative to clicking the **Run** button.



During Instruction (Formative Assessment)

- The conceptual grasp of students can be assessed during instruction through Practice Time, which has been placed after every major topic **in the Student's Book**, by observing how fast they carry out the task as given. A couple of questions may also be added to test their understanding of the concept. For example, in the question below students may be asked if they can use the tl command in the solution to this question instead of the tr command.

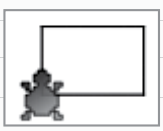
PRACTICE TIME

Tina wants to draw a rectangle of breadth 40 steps and length 60 steps in KTurtle using the `turnright (tr)` command. Can you help her out?

```
1 reset
2 fw 40
3 tr 90
4 fw 60
5 tr 90
6 fw 40
7 tr 90
8 fw 60
9 tr 90
```

SOLUTION

1. Tina should type the code given alongside in the KTurtle Editor pane.
2. After typing the code, she should click the **Run** button.
3. The output will appear as given here.

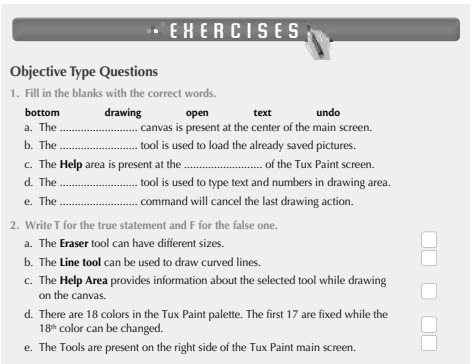


Note: Try doing the same using the `tl` command also.

End-of-Chapter (Summative Assessment)

- At the end of the chapter the student can be tested on acquired knowledge through the objective and descriptive

questions of the **Exercises**, the **Application-Based Questions**, and on the practical application of concepts through **In the Lab** questions, and **Group Project**.



EXERCISES

Objective Type Questions

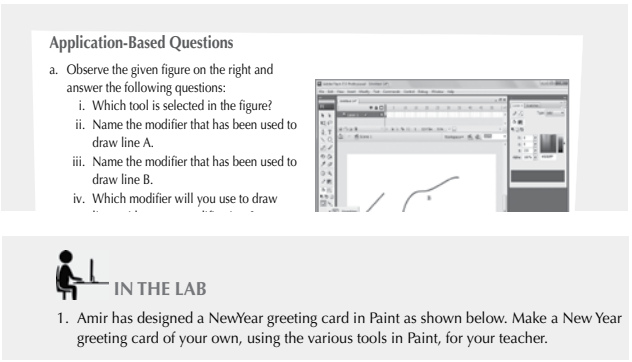
1. Fill in the blanks with the correct words.

bottom drawing open text undo

a. The ..... canvas is present at the center of the main screen.
b. The ..... tool is used to load the already saved pictures.
c. The **Help** area is present at the ..... of the Tux Paint screen.
d. The ..... tool is used to type text and numbers in drawing area.
e. The ..... command will cancel the last drawing action.

2. Write T for the true statement and F for the false one.

a. The **Eraser** tool can have different sizes.
b. The **Line tool** can be used to draw curved lines.
c. The **Help Area** provides information about the selected tool while drawing on the canvas.
d. There are 18 colors in the Tux Paint palette. The first 17 are fixed while the 18th color can be changed.
e. The Tools are present on the right side of the Tux Paint main screen.



Application-Based Questions

a. Observe the given figure on the right and answer the following questions:
   i. Which tool is selected in the figure?
   ii. Name the modifier that has been used to draw line A.
   iii. Name the modifier that has been used to draw line B.
   iv. Which modifier will you use to draw

IN THE LAB

1. Amir has designed a NewYear greeting card in Paint as shown below. Make a New Year greeting card of your own, using the various tools in Paint, for your teacher.

End-of-Unit and Term (Formative as well as Summative Assessment)

- Assessment at the end of a unit, or a set of three or four chapters, is facilitated through **Worksheets** in classes I to V**.**

TEACHING GUIDES

The Teaching guides provide the following support for **formative** and **summative** assessment:

- **Worksheets**, **one for each chapter**, have questions in the form of Crossword Puzzles, Word Searches, Jumbled Words, etc. designed to reinforce conceptual understanding.
- **Test papers**, **one for each chapter**, which may be used by teachers by photocopying them in a larger format for classroom tests.

DIGITAL RESOURCES

The downloadable digital resources are for the series provided accompanied with **Test Generator**.

The Digital resource for *Keyboard: Computer Science with Application Software*, includes:

- **Animations** for the theoretical chapters such as that on operating systems, history of computers, input and output devices, etc. that offer an interesting audio-visual element to technically complex or difficult concepts. There are one or more modules for each such chapter which may be paused at relevant points and feedback taken on what the children have seen, heard, and understood.
- **Demo Videos** that are linked to one of the Practice Times in software chapters (those chapters that describe the features and commands available in a software), and present a step-by-step audio-visual guide to solving the problem described in that particular Practice Time question. One or more objective type question(s) has (have) been introduced at (a) strategic point(s) under the feature **Rapid Round** during the demo to encourage children to participate in the solution to the problem. These questions could be also be used as a formative assessment tool.
- **Interactive Exercises** The **objective type questions** have been made interactive in the form of pop-up screens in which the right answer can be typed in or clicked. Clicking **Submit** will give you feedback, hence these can be used as a formative assessment tool for quick evaluation.
- **Printable documents** for every chapter in the form of soft copies of the worksheets and test papers given in the Teaching Guides. The teacher is free to use either version of the worksheets and test papers as formative

assessment tools.

- Additional projects, Cyber Olympiad questions for practice, revision questions, and sample assessment papers (in classes 6 to 8).

The **Test Generator** accompanying **digital resources** is an effective assessment tool designed to benefit teachers by enabling them to create a variety of test papers.

It has two sections: (a) Coursebook questions (b) Questions beyond the coursebook.

Both have an extensive pool of questions including multiple choice, true or false, fill in the blanks, very short answer, and short answer questions, as well as lab exercises wherever relevant. The Test Generator can be used to create test papers for one or more chapters, with a mix of questions from both the sections. The wide variety of objective and descriptive type of questions makes the tool flexible enough for teachers to employ it either for formative or for summative assessment. Answers have also been provided for these questions to aid efficient and effective evaluation by teachers.

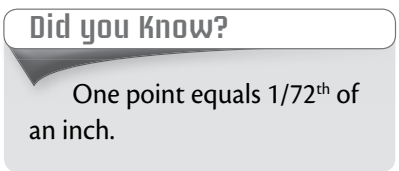
COMPREHENSIVE EVALUATION

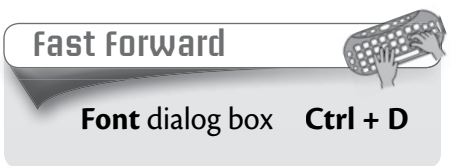
Comprehensive evaluation involves, as explained above, both the scholastic and co-scholastic aspects of a student's growth and development. It aims to assess the student not only in the area of pure knowledge but also in the areas of their analytical and creative ability, as well as in their general attitudes and aptitudes.

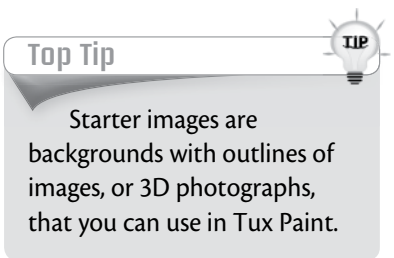
The key features in ***Keyboard: Computer Science with Application Software,*** have been designed to provide both scholastic and co-scholastic development.

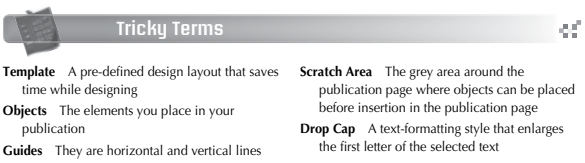
Scholastic

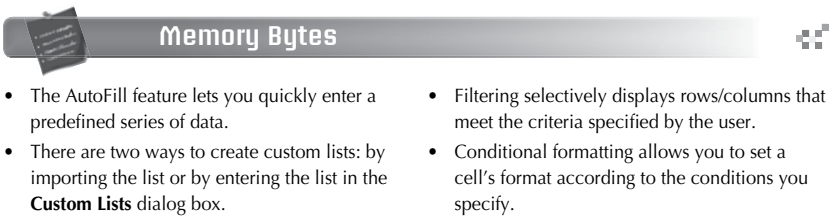
- The features such as Did You Know?, Fast Forward, Top Tip, Tricky Terms, and Memory Bytes, enhance and reinforce conceptual knowledge.





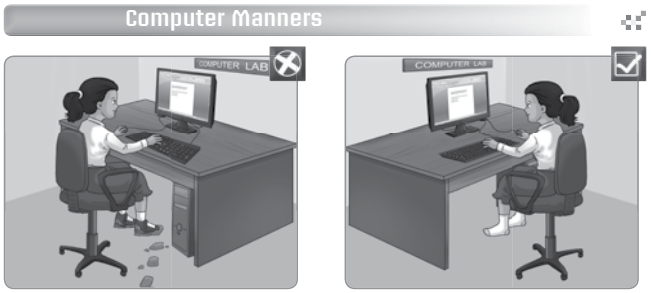


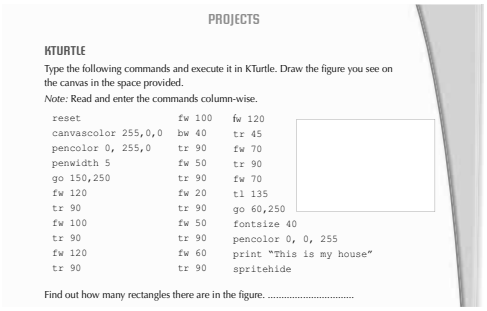


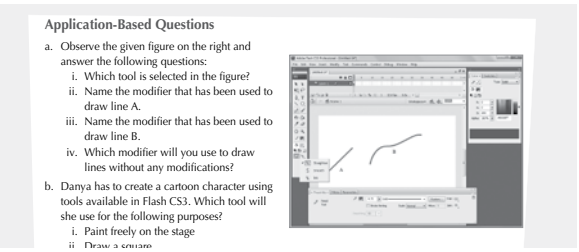


Co-Scholastic

- The features such as Computer Manners, Projects, and the design of the practical exercises focus both on scholastic and co-scholastic areas by creating awareness on ethical and correct use of computers, as well as the use of computers as a tool for applying their creativity and enhancing their problem-solving skills.







SCHEME OF WORK AND LESSON PLANS

- A **Scheme of work** and **Lesson Plan** has been devised for each chapter which details the number of periods recommended for that chapter, the topics covered in that chapter, the recommended topic-wise allocation of periods, the learning outcomes, and the **downloadable digital resources** available for that chapter.
- The total number of periods in a year for computer science has been taken at 36 assuming one period in a week for the subject.
- Teachers may go through the lesson plan before stepping into the class. However, this is a proposed lesson plan, and teachers are free to modify it as per their teaching styles, sequence, and requirements in respect of the chapters.

SCHEME OF WORK*

Chapter Title	In this Chapter	Topic-wise Allocation of Periods	Learning Outcomes
1. Operating System	What is a Computer Made Of	1	The student should be able to: • differentiate between hardware and software.
	Operating System	1	• define the term operating system. • explain its use.
	Types of Operating Systems	1	• differentiate between single-user and multi-user operating systems. • give a brief introduction of Microsoft Windows.
	Desktop and Icons	3	• define the terms Desktop and Icons. • identify different icons on the Desktop. • differentiate between files and folders. • demonstrate how to change the position of the taskbar. • describe the use of the **Start** button. • label the left pane and right pane of the **Start** menu.
2. More About Paint	Moving and Copying Objects	1.5	The student should be able to: • select objects. • differentiate between **Rectangular Selection** tool and **Free form selection** tool. • demonstrate how to select a drawing or part of a drawing using the **Select** tool.
	Undo and Redo	3	• copy and move objects. • differentiate between the **Cut** and **Copy** commands. • explain how to paste a picture into Paint. • differentiate between the **Undo** and **Redo** commands.
	Rotate/Flip a Drawing	1	• flip and rotate a drawing.
	Resize a Drawing	1	• resize a drawing.
	Skew a Drawing	1	• differentiate between resize and skew. • skew a drawing.
	Set Drawing as a Desktop Background	0.5	• set a drawing as a desktop background.
	Zoom In and Out	1.5	• label the options available on the **View** tab. • explain what zooming means. • differentiate between **Zoom In** and **Zoom Out.**
3. Let's Learn KTurtle	Starting KTurtle	1	The student should be able to: • identify various parts of the KTurtle screen.
	Entering Commands	6	• demonstrate how to enter commands and run them. • save a program. • remember the extension of a KTurtle file. • explain the working of the `fw`, `tr`, `bw` and `tl` commands. • draw a square using the turtle commands.

* The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

Chapter Title	In this Chapter	Topic-wise Allocation of Periods	Learning Outcomes
	The Toolbar	1	• appropriately use the commands on the toolbar.
			• recall the use of different speeds at which program can be run.
	Saving an Image	0.5	• save an image. • remember the file extension of a saved image.
4. KTurtle Commands	Revision of Previous Chapter	2	The student should be able to: • recall the commands learnt in the earlier chapter. • to move the turtle forward or backward. • type commands and correct typing errors.
	FORWARD Command		
	BACKWARD Command		
	TURNRIGHT Command	2	• turn the turtle right and left. • explain the concept of angles. • differentiate between the `tr` and `tl` commands. • give examples for the commands. • realise that `tr 360` and `tl 360` commands will give the same result.
	TURNLEFT Command		
	DIRECTION Command	2	• differentiate between `dir`, `tr`, and `tl` commands.
	CENTER Command		• demonstrate how to use the **Direction Chooser** dialog box. • use the `center` command appropriately.
	Setting Canvas Size and Color	2	• set the canvas size and canvas color. • demonstrate how to use the **Color Picker** dialog box.
	Setting Pen Width and Color	2	• set the pen width and pen color. • describe how the **Color Picker** dialog box can be used to get the RGB values.
	Clear and Reset Commands	1	• differentiate between `clear` and `reset` commands.
5. Writing and Math in KTurtle	FONTSIZE Command	1	The student should be able to: • change the font size and write text or numbers on the canvas. • use the `fontsize` command with the `print` command.
	PRINT Command		
	GO Command	1	• describe the purpose of the `go` command. • use the `go` command appropriately.
	SPRITEHIDE and SPRITESHOW Commands	1	• describe what the `spritehide` and `spriteshow` commands do.
	Math in KTurtle	6	• list the arithmetic operators used in KTurtle. • demonstrate how to use the arithmetic operators and other turtle commands with the `print` command.
			• describe the syntax of the `ask` and `message` commands. • demonstrate how to use `ask` and `message` commands.

* The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

Chapter Title	In this Chapter	Topic-wise Allocation of Periods	Learning Outcomes
6. Editing Text in Word 2013	Revision of class 2 chapter	2	The student should be able to: • start Word 2013. • create a new document. • open a Word 2013 document. • close a Word 2013 document. • exit Word 2013.
	Parts of the Word 2013 Window	1	• explain the function of the different parts of the Word 2013 window.
	Editing Text	6	• explain the term **editing.**
	Selecting Text		• demonstrate how to select text using a mouse. • demonstrate how to select text using a keyboard.
	Inserting Text		• explain **OVERTYPE** and **INSERT** mode. • demonstrate how to select **INSERT** / **OVERTYPE** mode. • demonstrate how to insert a blank line.
	Deleting Text		• demonstrate how to delete a character, a word, or a block of text.
	Undo and Repeat Commands	0.5	• explain the difference between **Undo** and **Repeat** commands. • demonstrate how to use the **Undo** and **Redo** buttons.
	Copying and Moving text	1.5	• explain the difference between **Copy** and **Cut** commands. • demonstrate how to copy and move text.
7. Formatting Text in Word 2013	Character Formatting	5	The student should be able to: • explain what is formatting. • explain the meaning of Font and default settings.
			• discuss the use of the Font group on the HOME tab. • demonstrate how to format text using Font group. • demonstrate how to format text using Font dialog box. • demonstrate how to apply text effects.
	Highlighting and Aligning Text	1.5	• demonstrate how to highlight text and also remove highlighting. • explain the meaning of alignment and different types of alignment. • demonstrate how to change the alignment of text.
	Applying Borders and Shading	1.5	• demonstrate how to apply borders and shading to text.
8. Enjoy with Tux Paint	Starting Tux Paint	0.5	The students should be able to: • start Tux Paint.
	Main Screen	0.5	• identify the different parts of the Tux screen window. • demonstrate how to get a color of your choice.
	Drawing Tools	6	• demonstrate how to use the different tools—**Paint**, **Lines**, **Shapes**, **Text**, **Eraser.** • differentiate between **Paint** and **Lines** tool. • explain how to add text to the drawing using the **Text** tool.

* The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

Chapter Title	In this Chapter	Topic-wise Allocation of Periods	Learning Outcomes
			• explain how the **Magic** tool is used to give drawing effects to your drawing. • show the working of the **Eraser** tool.
	Other Controls	2	• differentiate between **Undo** and **Redo** commands. • explain how to start a new drawing. • demonstrate how to save, open an existing drawing and quit Tux Paint. • show how to print the drawing on the printer.

* The topic-wise allocation of periods for each chapter may vary, as per the individual class requirements.

LESSON PLANS*

Chapter 1 Operating System

Time for each lesson: 40 minutes

Resources: a mouse, a keyboard, dummy computer toys, computer lab

Introduction (5 minutes)

Before formally beginning the chapter, introduce the topic in an informal way by asking students to identify the devices that you have brought with you to class. Elicit responses from them about the uses of those devices. Explain that they are all parts of a computer and are called hardware.

Explanation (25 minutes)

Next you may explain the concept of hardware and software to your students. It would be a good idea to take them to the computer lab so that they can grasp the concept better. You can help them identify what a desktop is and what icons are. Also, demonstrate to them all the different computer actions that are mentioned in the chapter.

Let the students read from the text with your assistance and give them ample time to practice all the computer actions from their textbooks. You can assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- differentiate between hardware and software.
- define the term operating system.
- explain its use.
- differentiate between single-user and multi-user operating systems.
- give a brief introduction of Microsoft windows.
- define the terms desktop and icons.
- identify different icons on the desktop.
- differentiate between files and folders.
- demonstrate how to change the position of the taskbar.
- describe the use of the taskbar.
- describe the use of the start button.
- label the left pane and right pane of the start menu.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

* The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 2 More About Paint

Time for each lesson: 40 minutes

Resources: Paint software, computer lab

Introduction (5 minutes)

You may begin the session by having students recall what they have learnt in the past year (in Keyboard Book 2). A general discussion of all the commands that they have previously studied will help set the foundation for this chapter. (You may give them pointers; however, make sure they engage in the discussion by having them explain the commands in detail).

Explanation (25 minutes)

For this lesson, it would be helpful if you take the students to the computer lab. Show them how to move objects, cut/copy/paste them, rotate and resize drawings, zoom in or out etc. Give them ample time to practice all the new commands taught in the chapter.

It is also recommended that you allow students to perform the Practice Time questions as it will help them remember what they have learnt in class. You can assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- select objects.
- differentiate between Rectangular Selection tool and Free Form Selection tool.
- demonstrate how to select a drawing or part of a drawing using the Select tool.
- copy and move objects.
- differentiate between the Cut and Copy commands.
- explain how to paste a picture into Paint.
- differentiate between the Undo and Redo commands.
- flip and rotate a drawing.
- resize a drawing.
- differentiate between resize and skew.
- skew a drawing.
- set a drawing as a desktop background.
- label the options available on the View tab.
- explain what zooming means.
- differentiate between Zoom in and Zoom out.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

* The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Chapter 3 Let's Learn KTurtle

Time for each lesson: 40 minutes

Resources: KTurtle, computer lab

Introduction (5 minutes)

Introduce KTurtle to students as a software that teaches basic maths, geometry, and easy programming to beginners.

Explanation (25 minutes)

It is important that you take your students to the computer lab for this lesson. Demonstrate to them how to start KTurtle and the various commands that have been explained in this chapter. Once you have shown them, make sure that you have students practice all the commands and the Practice Time question themselves as well. You must also explain the FW, TR, BW and TL commands properly.

You may also ask students to go through the chapter and to ask any questions that they may have regarding it. You can then assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- identify various parts of a KTurtle file.
- demonstrate how to enter commands and how to run them.
- save a program.
- remember the extension of a Kturtle file.
- explain the working of the fw, tr, bw, and tl commands.
- appropriately use the commands on the toolbar.
- recall the use of different speeds at which program can be run.
- save an image.
- remember the file extension of a saved image.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

Chapter 4 KTurtle Commands

Time for each lesson: 40 minutes

Resources: KTurtle, computer lab

Introduction (5 minutes)

You may begin the session by having students recall what they have learnt in the previous chapter. A general discussion of all the commands that they have previously studied will help set the foundation for this chapter.

* The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

Explanation (25 minutes)

Explain to students the different commands that are touched upon in this chapter including forward/backward command, turnright/turnleft command, direction command, centre command and clear/reset command. Also demonstrate to them how to set the canvas size, canvas colour, pen colour, and width. You should ensure that they remember the abbreviations for all the commands.

It is recommended that you have students perform the Practice time questions as part of their classwork. You can assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

To test their knowledge, you can also randomly ask them to perform one or two commands, but only once you are done with teaching this chapter.

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- recall the commands learnt in the earlier chapter.
- to move the turtle forward or background.
- type commands and correct typing errors.
- turn the turtle right and left.
- explain the concept of angles.
- differentiate between the tr and tl commands.
- give examples for the commands.
- realise that tr 360 and tl 360 commands will give the same result.
- differentiate between dir, tr, and tl commands.
- demonstrate how to use the Direction Chooser dialog box.
- use the center command appropriately.
- set the canvas size and canvas colour.
- demonstrate how to use the Color Picker dialog box.
- set the pen width and pen color.
- describe how the Color Picker dialog box can be used to get the RGB values.
- differentiate between clear and reset commands.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

Chapter 5 Writing and Math in KTurtle

Time for each lesson: 40 minutes

Resources: KTurtle, computer lab

Introduction (5 minutes)

* The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

You may begin the session by having students recall what they have learnt in the previous two chapters. A general discussion of all the commands that they have previously studied will help set the foundation for this chapter.

Explanation (25 minutes)

In this lesson, it is recommended that you take your students to the computer lab. You can first explain the various commands mentioned in the chapter like fontsize command, print command, go command, and spritehide/spriteshow command. Make sure students are aware of when to use which command. Similarly for the arithmetic operators, explain the commands to them and have them practice all of them individually. You can assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- change the font size and write text or numbers on the canvas.
- use the fontsize command with the print command.
- describe the purpose of the go command.
- use the go command appropriately.
- describe what the spritehide and spriteshow command do.
- list the arithmetic operators used in KTurtle.
- demonstrate how to use the arithmetic operators and other turtle commands with the print command.
- describe the syntax of ask and message commands.
- demonstrate how to use ask and message commands.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

Chapter 6 Editing Text in Word 2013

Time for each lesson: 40 minutes

Resources: MS Word 2013, computer lab

Introduction (5 minutes)

You may begin the session by asking students which software in their opinion is used to type and print all of their school circulars, classroom worksheets, test papers etc. Encourage all of them to participate in the discussion that ensues. You may then introduce them to MS Word 2013.

Explanation (25 minutes)

You can take your students to the computer lab and introduce them to MS Word 2013 and its many elements. Demonstrate to them how to insert, edit, overtype, and delete text. You should also show them how the undo/redo commands functions as well as the cut/copy/paste commands. Once you are done, assign students

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random commands and have them perform them in class so that you may be able to assess their work. You can also assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- start Word 2013.
- create a new document.
- open a Word 2013 document.
- close a Word 2013 document.
- exit Word 2013.
- explain the function of the different parts of the Word 2013.
- explain the term editing.
- demonstrate how to select text using a mouse.
- demonstrate how to select text using a keyboard.
- explain OVERTYPE and INSERT mode.
- demonstrate how to select INSERT/OVERTYPE mode.
- demonstrate how to insert a blank line.
- demonstrate how to delete a character, a word, or a block of text.
- explain the difference between Undo and Repeat commands.
- demonstrate how to use the Undo and redo buttons.
- explain the difference between Copy and Cut commands.
- demonstrate how to copy and move text.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

Chapter 7 Formatting Text in Word 2013

Time for each lesson: 40 minutes

Resources: MS Word 2013, computer lab

Introduction (5 minutes)

You may begin the session by having students recall what they have learnt in the previous chapter. A general discussion of all the commands that they have previously studied will help set the foundation for this chapter.

Explanation (25 minutes)

This lesson again requires that you take your students to the computer lab. Demonstrate to them how to highlight and align text, and how to apply borders and shapes to a document. Finally, show them how to

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format characters in MS Word 2013.

Ensure that you provide students with ample time to practice all the functions that they have learnt in this chapter. You can also allot time for them to perform the Practice time questions individually. Finally, assign any of the following tasks for classwork.

- Exercises
- In the Lab
- Group Project
- Worksheets

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- explain what is formatting.
- explain the meaning of Font and default setting.
- discuss the use of the Font group on the HOME tab.
- demonstrate how to format text using Font group.
- demonstrate how to format text Font dialog box.
- demonstrate how to apply text effects.
- demonstrate how to highlight text and also remove highlighting.
- explain the meaning of alignment and different types of alignment.
- demonstrate how to change the alignment of text.
- demonstrate how to apply borders and shading to text.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

Chapter 8 Enjoy with Tux Paint

Time for each lesson: 40 minutes

Resources: Tux Paint, computer lab

Introduction (5 minutes)

You may begin the session by having students recall what they have learnt in their previous sessions about Paint. A general discussion of its functions will help set the foundation, after which you can introduce them to Tux Paint.

Explanation (25 minutes)

This lesson again requires that you take your students to the computer lab. Introduce them to Tux paint and help them navigate through its various tools and elements. Demonstrate how to use its drawing tools and also explain when to use each of them. You may also allot time for each student to individually perform the Practice Time question.

You can also assign any of the following tasks for classwork.

- Exercises
- In the Lab

* The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

- Group Project
- Worksheets

At the end of the session, in order to test their knowledge, you may ask them to identify a few tools, create different shapes/lines, add magic effects to an image etc.

Assessment

Students' learning should be assessed on Bloom's taxonomy model, as well as on their class participation, enthusiasm, inquiry, and team work. At the end of the lesson, students will be able to:

- start Tux Paint.
- identify the different parts of the Tux screen window.
- demonstrate how to get a colour of your choice.
- demonstrate how to use the different tools- Paint, Lines, Shapes, text, Eraser.
- differentiate between Paint and Lines tool.
- explain how to add to the drawing using the Text tool.
- explain how the Magic tool is used to give drawing effects to your drawing.
- show the workings of the Eraser tool.
- differentiate between Undo and Redo commands.
- explain how to start a new drawing.
- demonstrate how to save, open an existing drawing, and quit Tux Paint.
- show how to print the drawing on the printer.

Conclusion (10 minutes)

Encourage students to give you a recap of the main points they have learnt in the lesson. Discuss computer manners and read through the tricky terms, given at the end of the chapter.

* The lesson plan for each chapter has a flexible structure. It can be split up into daily lesson plans to suit various classroom needs.

ANSWER KEY TO THE COURSEBOOK

- The complete Answer Key to the Coursebook Exercises has been given here including that for the In the Lab questions, Group Projects, Worksheets/Assessment papers, Revision Questions, and the Cyber Olympiad Questions.
- These are only suggested answers, and variations are possible especially for the open-ended questions, such as the descriptive questions, and those of In the Lab. Teachers may use their discretion while checking the answers provided by the students, and give them marks based on conceptual accuracy and conceptual clarity.

Chapter 1 Operating System

OBJECTIVE TYPE QUESTIONS

1. a. Folder b. Single-user c. Desktop
   d. Operating System e. Icons

   a. F b. T c. F d. F e. T

2. a. i. Operating System b. i. Unix c. ii. Two
   d. iii. both (i) and (ii) e. ii. Left

DESCRIPTIVE TYPE QUESTIONS

1. a) The left pane of the Start menu shows the recently opened programs.

   b) Differentiate between hardware and software.

   Hardware refers to the parts of the computer that you can touch or feel, whereas software refers to a set of programs that help perform tasks on a computer. All input and output devices are computer hardware. Programs such as MS Office, Paint, etc. are software.

   c) How does an operating system help the computer to function?

   An operating system is a program that enables the hardware to work efficiently with software. The user inputs the data using different software; the CPU processes the software; the output is then displayed on an output device. The operating system thereby helps to create this exchange of input and output.

   d) Describe the properties of a desktop.

   The screen on the monitor is called the desktop, and the small pictures that represent files, folders, or programs are called icons. The computer user double-clicks the icons to open the file, folder, or program.

   e) Why is it important to have different files and folders?

   It is important to have different files and folders in order to stay organized, otherwise, you will lose track of information. Also you will have to spend much time looking for those files and folders. Good organization skills can save time and reduce stress.

   f) Outline the steps required to change the position of a taskbar.

   Outlined below are the steps required to change the position of the taskbar:

   i. Click the mouse directly on the taskbar.
   ii. Hold the mouse button, dragging it to whichever place on the desktop you want it to be.
   iii. The taskbar can be moved to the left, right, top, or bottom of your desktop.
   iv. Release the mouse once you have placed the taskbar in the desired position.

   g) Why might you not be able to move the taskbar? Also, offer a solution.

   We might not be able to move the taskbar if it is locked. To unlock it, right-click an empty space on the taskbar; a context menu will appear. Click on the 'Lock the Taskbar' checkmark so it disappears.

   h) List the steps you will take to access Word 2013.

   Follow the steps to access Word 2013:

   i. Click on the Start button at the left corner of the taskbar.
   ii. You will see a menu called the Start Menu.
   iii. Click on All Programs to see the complete list of programs.

iv. Click on Microsoft Office 2013 to see the various options.
v. Double click on Word 2013 to access the program.

APPLICATION-BASED QUESTIONS

a. i. He should install Single-user operating system.
ii. Windows 7 or Windows 8
b. i. Two folders–Images, OpenOffice 4.0.0
ii. (i) Start button (ii) Taskbar

IN THE LAB

1. a. Students will observe Windows 7 operating system on their computers in the computer lab. Students should be encouraged to write the name of the operating system if it is different. Teachers should provide information about the operating system loaded on the computers of the computer lab.
   b. Students should be encouraged to seek help from the elders at home to find out the operating system loaded onto the computer at their home.
2. a. Students should be encouraged to observe all the icons on the desktop and draw any two of those.
   b. Students should be encouraged to observe the icons of a folder and of the recycle bin on the desktop and draw them appropriately.
3. Notice the position of the Taskbar. The steps to change the position of the Taskbar are:
   a. Move the mouse pointer to an empty space on the taskbar.
   b. Click and hold the mouse button.
   c. Drag the mouse pointer to the right side of the computer screen (or the side to which you want to move the taskbar).
   d. Bring it back to the original position, again click, and hold the mouse button.
   e. Drag the mouse pointer to the original position.
4. The teacher can demonstrate how the icons can be moved by using the drag-and-drop method. They select a certain icon and move it according to alphabetical order. Experiment with moving them around and pick one side. At the end of this lab exercise, you can allow the students to see the desktop displays of each other.

GROUP PROJECT

1. Demonstrate to the children what the taskbar is and check if the taskbar is locked. Here is how you can do this: Place the cursor anywhere on the taskbar and right click to view the drop down menu. If there is a tick on the option 'lock the taskbar', click on it so the tick mark disappears and the taskbar is locked no more.

   You can change the position of the taskbar to any of the four sides of the screen. Follow these steps:
   - Move the mouse pointer to an empty space on the taskbar.
   - Click and hold the mouse button.
   - Drag the mouse pointer to the left/right/top/bottom of the screen.
   - Release the mouse button.
   - It will be in the position you dragged the mouse pointer to.
2. Show the Start button at the left hand corner of the taskbar to the students. Click on it to view the Start menu.

   Click on All Programs to view the list of programs in alphabetical order.

   Click on the different programs to explore and see what these programs enable the user to do.

Chapter 2 More About Paint

OBJECTIVE TYPE QUESTIONS

1. a. Cut b. Zoom In c. Zoom out d. Reverse e. Select

2. a. F b. T c. T d. F e. F

DESCRIPTIVE TYPE QUESTIONS

1. a. The Paint software is used to draw, colour, and edit pictures.

   b. The function of the Cut and Paste tool is to Cut the selected data from its original position, and then insert where Paste command is given.

   c. The Copy tool is used to duplicate the image of the kite I have drawn. I will take the following steps to do so:

   - Click the Select option.
   - Drag the mouse to select the kite and then click on the Copy command.
   - Click on Paste.
   - Drag the picture of the pasted kite to wherever you want it on the drawing area.

   d. The Undo button will reverse the action I have taken, so I can use it to see how my picture will look without the flower that I have drawn.

   e. The Flip tool is used to create a mirror image of my drawing, whereas the Rotate tool can change the angle of the selected portion of a picture or the entire image. Both tools are equally simple to use.

   f. The Skew tool allows you to resize a picture. It can be used to resize the size of the tree which covers the entire screen so it only fills half the screen.

APPLICATION-BASED QUESTIONS

a. i. Pencil tool, Brush tool

   ii. **Home** tab is selected in the given figure.

   iii. Foreground color–Black
   Background color–White

b. i. **Home** tab of the Paint window is used to change the foreground and background colours.

   ii. Pencil tool, Brush tool, Paint Bucket tool, Shapes tool.

IN THE LAB

1. a. To insert a shape:

   i. In the **Shapes** group, click a readymade shape.

   ii. Click the down-arrow under Size and select the thickness of the line.

   iii. In the Colors group, click Color 1, and then select a colour. Click Color 2 a then select a colour to fill the shape.

   iv. Click the down-arrow of **Outline** option and select a line style.

   v. Click the down-arrow of the **Fill** option and select a fill style.

   vi. To draw the shape, click and drag the mouse on the drawing area.

b. You can use the **Text** tool to type text in the drawing.
   i. In the **Tools** group, click the **Text** tool.
   ii. Click in the drawing area where you want to add text.
   iii. Notice that the **Text** tab appears in the main toolbar. In the **Fonts** group, select the font, size, and style.
   iv. In the **Colors** group, click **Color 1** and then click a colour for the text.
   v. Type the text.

2. a. To draw using the **Pencil** tool:
   i. Select **Pencil** tool.
   ii. Click **Color 1** and then select a colour of your choice.
   iii. Click the down arrow under **Size** option and then select the thickness of the line.
   iv. Click and drag on the drawing area to draw the shape.

b. To colour using **Fill with color** tool:
   i. In the **Tools** group, click the **Fill with color** tool.
   ii. In the **Colors** group, click **Color 1** and then select a colour.
   iii. Bring the mouse pointer onto the drawing area.
   iv. Click inside the shape to fill it with colour.

c. To write using **Brushes** tool:
   i. Click down arrow of **Brushes** tool and select the Calligraphy Brush 1.
   ii. Click the down arrow of Size option and then select the thickness of the brush.
   iii. Click **Color 1** and then select red color.
   iv. Click and drag to write.

d. To draw using **Curve** tool:
   i. In the **Shapes** group, click the **Curve** tool.
   ii. Click the arrow under **Size** and then select the thickness of the **Curve** tool.
   iii. In the **Colors** group, click **Color 1** and then select a colour.
   iv. In the **Shapes** group, click **Outline** and then choose a line style.
   v. Bring the mouse pointer onto the drawing area. Drag the mouse to draw a line.
   vi. Click the line and drag the mouse to get a curve.

3 a. To draw using the **Pencil** tool:
   i. Select **Pencil** tool.
   ii. Click **Color 1** and then select a colour of your choice.
   iii. Click the down arrow under **Size** option and then select the thickness of the line.
   iv. Click and drag on the drawing area to draw the shape.

b. To colour using **Fill with color** tool:
   i. In the **Tools** group, click the **Fill with color** tool.
   ii. In the **Colors** group, click **Color 1** and then select a color.
   iii. Bring the mouse pointer onto the drawing area.
   iv. Click inside the shape to fill it with color.

4. a. To draw using **Brushes** tool:
   i. Click down arrow of **Brushes** tool and select the artistic brush.
   ii. Click the down arrow of Size option and then select the thickness of the brush.
   iii. Click **Color 1** and then select a colour of your choice.
   iv. Click and drag to draw.
   b. To draw using the Pencil tool:
   i. Select **Pencil** tool.
   ii. Click **Color 1** and then select a color of your choice.
   iii. Click the down arrow under **Size** option and then select the thickness of the line.
   iv. Click and drag on the drawing area to draw the shape.
   c. To colour using **Fill with color** tool:
   i. In the **Tools** group, click the **Fill with colour** tool.
   ii. In the **Colors** group, click **Color 1** and then select a colour.
   iii. Bring the mouse pointer onto the drawing area.
   iv. Click inside the shape to fill it with colour

5. In order to design the certificate on Paint, follow the steps below:
   a. Click the Start button in the lower left-hand corner of the Desktop.
   b. In the Start menu, click All Programs, then Accessories, then click the Paint program.
   c. Use the Shapes tool to insert text boxes for your certificate.
   d. Click on the text tool and create a textbox. Type in the text.
   e. Edit fonts and font sizes.
   f. Use the Brushes tool to create borders with different artistic brushes and different effects. Click the Size button to select a thickness for the brush. Choose a colour from the Colors group.
   g. Use the Shapes tool to add stars of varying sizes and colours to decorate the certificate.

GROUP PROJECT

Instruct the children to break up in groups of four or five (depending on the size of the class and the number of computers that are available). Ensure that they divide the work equally so each child gets the chance to work on design. A good way to ensure this is by asking each group member to work with one shape and create the same shape of multiple sizes. You can use the cut and paste tool to bring balance to the design. Use the Rotate tool to rotate the shapes as you like. Use the Resize option to change the sizes of the shapes. Combine the shapes to create a beautiful design.

Worksheet—1

1. a. HARDWARE b. SOFTWARE c. DESKTOP
   d. ICONS e. TASKBAR

2. a. Folder b. File c. Start button
   d. HOME tab e. Quick Access Toolbar

3. a. Skew option b. Zoom In/Zoom Out c. Skew option
   d. Paint button e. Zoom Out

4. a. Hardware: Keyboard, Scanner, Printer
   b. Software: Windows 2013, Office 2013

Chapter 3 Let's Learn KTurtle

OBJECTIVE TYPE QUESTIONS

1. a. three b. Centre c. File d. New e. Abort
2. a. F b. F c. T d. T e. T

DESCRIPTIVE TYPE QUESTIONS

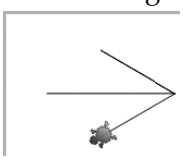
1. a. The different types of speeds are Full speed, Slow, Slower, Slowest, and Step-by-Step.
   b. Full speed
   c. We enter a one-line command on the console text box and press the Enter key or the Execute button to run it.
   d. I will look on the left side of the status bar to look for the action last performed.
   e. The FW or forward command is used to move the turtle in the forward direction whereas the BW or backward command is used to move the turtle in the backward direction.

APPLICATION-BASED QUESTIONS

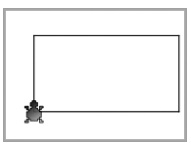
a. i. Editor ii. Canvas
b. i. Rectangle ii. Run

IN THE LAB

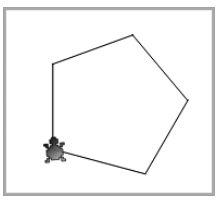
1. a. Name of the figure: Arrow



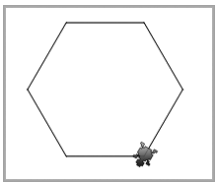
b. Name of the figure: Rectangle



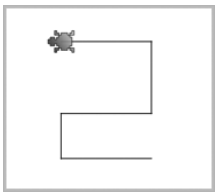
2. Type the command and execute it. The image of a pentagon will appear.
   To save the image, do the following:
   a. Click **Canvas** menu and select **Export to Image** (PNG) option.
   b. The **Save As Picture** dialog box appears. Save the file as Pentagon.
   c. Notice that the extension of the file is .png.



3. Type the command and execute it. The image of a Hexagon will appear on the screen. Save the image by the name of your choice. Notice the extension of the image is .png



4. Type the commands and execute it. The image of numeric 2 will appear on the screen. To print the image, do the following:
   a. Click the **Canvas** menu and select **Print Canvas** option.
   b. The **Print** dialog box appears.
   c. Select the printer and click the **Print** button.
   d. The drawing on the canvas will get printed on the paper.



5. Instruct the children to experiment on the computer with the given commands. Depending on how many steps they take, they may form a square or a rectangle.

GROUP PROJECT

A square is created with the following commands:	A rectangle is created with the following commands:	A circle is created with the following commands:
reset	reset	reset
fw 100	fw 180	tr 360/tl 360
tr 90	tr 90	
fw 100	fw 80	
tr 90	tr 90	
fw 100	fw 180	
tr 90	tr 90	
fw 100	fw 80	

Chapter 4 KTurtle Commands

OBJECTIVE TYPE QUESTIONS

1. a. `turnleft` b. `reset` c. `direction` d. `penwidth` e. `canvassize`
2. a. T b. T c. F d. F e. F
3. a. iv. both i. and ii. b. ii. `tl 90` c. iv. both ii. and iii.
   d. ii. `pencolor 255, 255, 0` e. ii. `canvassize 300, 300`

DESCRIPTIVE TYPE QUESTIONS

1. a. `canvassize 200,200`
   b. `penwidth 40`
   c. Yes. Both the commands turn the turtle's head by 360 degrees.
   d. A circular path consists of a total of 360 degrees.
   e. The direction command performs the same functions as 'tr' or 'tl'. It allows the turtle to point its head in any direction. Degrees are counted from the starting position of the turtle each time the command is given.
   f. The clear command is similar to the reset command in that they both clean the drawing on the canvas. The difference is that whilst the clear command enables the position and angle of the turtle, the canvas color, and canvas size—all to remain the same, the reset command brings the turtle back to the middle of the screen and resets everything to its original form.

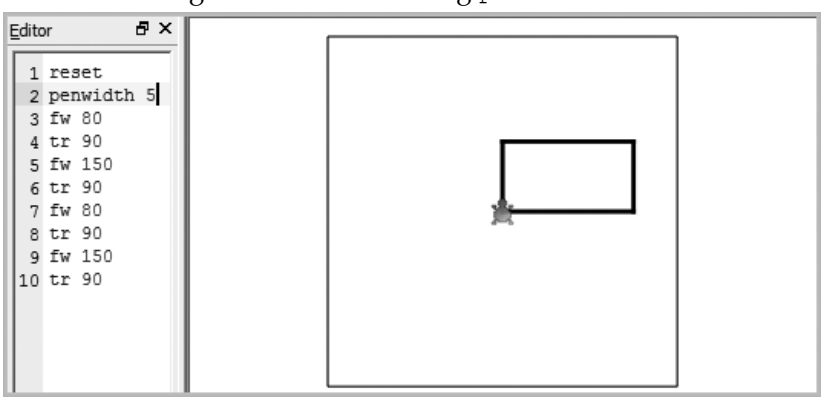
APPLICATION-BASED QUESTIONS

a. i. The same action can be performed using `turnleft 210`.
   ii. No
   iii. No

b. i. `turnleft 80` ii. `backward 90` iii. `reset`
   iv. `forward 60` v. `canvascolor 255, 0, 0`

IN THE LAB

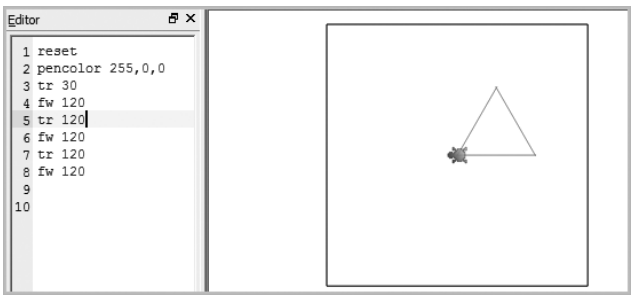
1. a. The commands to draw rectangle on the screen using `penwidth 5`:



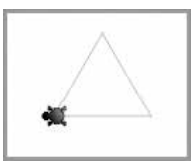
b. Run the program by changing the `penwidth` value to 25.

c. Run the program by changing the `penwidth` value to 50.

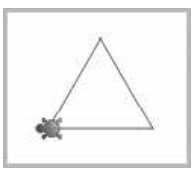
2. a. The commands to draw the triangle using `pencolor 255, 0, 0:`



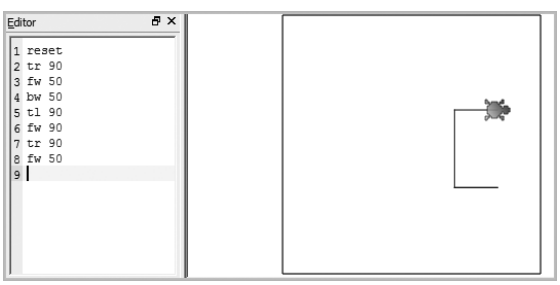
b. Change the `pencolor` value to `0, 255, 0.`



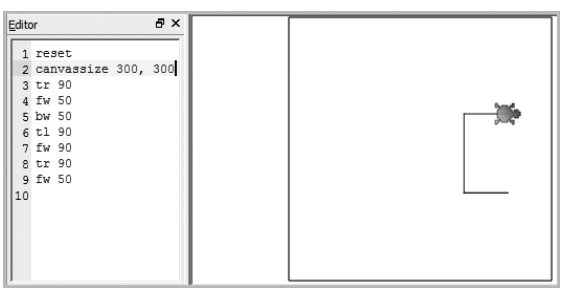
c. Change the `pencolor` value to `0, 0, 255.`



3. The command to draw C on the screen are:

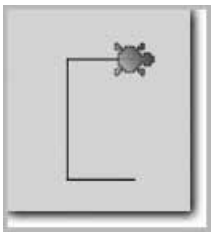


Change the `canvassize to 300, 300.`

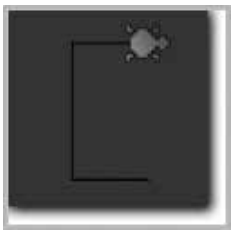


Changes the `canvascolor` to red

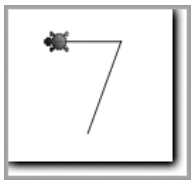
Changes the `canvascolor` to green



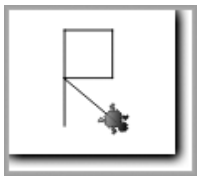
Changes the `canvascolor` to purple



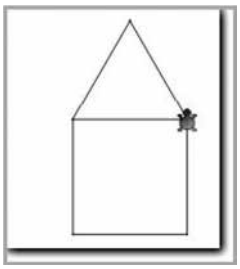
4. a.



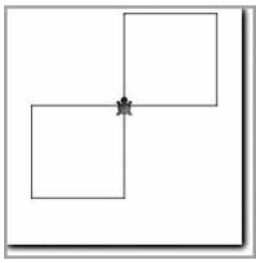
b.



c.



d.



5. a.
```
reset
penwidth 5
pencolor 255,0,0
tr 30
fw 120
tr 120
fw 120
bw 60
tr 118
fw 60
```

b.
```
reset
penwidth 10
pencolor 0,0,255
fw 150
tr 90
fw 120
bw 120
tr 90
fw 75
tl 90
fw 75
bw 75
tr 90
fw 75
tl 90
fw 120
```

6.
```
reset
fw 150
tr 90
fw 150
tr 90
fw 150
tr 90
fw 150
```

GROUP PROJECT

reset
tr 360
pw 50
pencolor RGB 255, 255,0

Chapter 5 Writing and Math in KTurtle

OBJECTIVE TYPE QUESTIONS

1. a. `print` b. `fontsize` c. `go` d. `spritehide` e. `spriteshow`
2 a. F b. T c. T d. T e. T
3 a. iii. * b. ii. - c. ii. `fw 70 + 5 - 15`
d. ii. `tr 90-20` e. ii. `go 40, 30`

DESCRIPTIVE TYPE QUESTIONS

1. a. The fontsize is an essential command of the KTurtle program because it sets the size of the font that is used by the turtle to write text or numbers on the canvas.
   b. The Print command enables us to write text or numbers on the canvas horizontally. If I want to print text, I will enter it using double quotes.
   c. I can move the turtle to the bottom of the canvas without drawing a line also with the help of the Go command.
   d. I will solve it by giving the following commands:
      reset
      go 20, 20
      fontsize 40
      print 84/4
   e. Follow the steps below to write the command:m
      a. I would use the 'ask' command to ask the name of a place and get an answer.
      b. The following are the steps I would take:
      c. $n = ask "Please enter your street name"–this is the question.
      d. Enter your street name and click OK to answer the question.

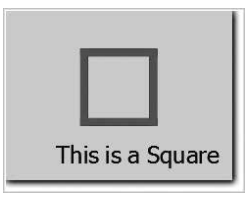
APPLICATION-BASED QUESTIONS

a. i. `spritehide` ii. `reset`
b. i. - iii ii. – iv iii. – v iv. – i v. – ii

IN THE LAB

1. Students should be encouraged to write a riddle or a poem using fontsize, go, and print commands as shown in the example.
2. a. moves the turtle forward by 120 steps
   b. moves the turtle backward by 60 steps
   c. moves the turtle right from previous position by 180 degrees
   d. moves the turtle left from previous position by 100 degrees
   e. moves the turtle right from starting position to 200 degrees
3. a. 4272
   b. 32
   c. 2078
   d. 644
   e. 1009
4. a.

b.



Explain to the students that the turtle is almost always visible on the canvas. The turtle is also called a sprite. Use the spritehide or sd command to hide the turtle so that it becomes invisible once your drawing is complete. Use the spriteshow or ss command if you want to make the turtle appear on the screen again.

GROUP PROJECT

1. i) reset
   go 20, 20
   font size 40
   print 45 + 83

   ii) reset
   go 20, 20
   font size 40
   print 67 + 93

   iii) reset
   go 20, 20
   font size 40
   print 900 - 456

   iv) 675 – 325
   reset

```
go 20, 20
font size 40
print 675 - 325
```

2. i. for multiplication problem reset

```
go 20, 20
font size 40
print 480 * 14
```

ii. for division problem reset

```
go 20, 20
font size 40
print 240 / 80
```

Worksheet—2

1. `TURNRIGHT, TURNLEFT, PENWIDTH, CANVASCOLOR, RESET, FORWARD, SPRITESHOW, PENCOLOR, BACKWARD`
2. a. iii b. iv c. v d. ii e. i
3.

```
reset turnright 90
penwidth 5
pencolor 255, 0, 0
forward 60
turnright 90
forward 100
```

```
forward 60
turnright 90
forward 100
turnright 90
```

4. `ss, cc, pw, dir, sh, tr, tl, fw, bw, cs0`

Chapter 6 Editing Text in Word 2013

OBJECTIVE TYPE QUESTIONS

1. a. copy b. file c. Redo d. Save e. Clipboard
2. a. iii. both (i) and (ii) b. i. SHIFT + ← c. ii. Ctrl + Z
   d. iii. Backspace e. i. Ctrl + V

DESCRIPTIVE TYPE QUESTIONS

1. a. The functions of horizontal and vertical scroll bars are that they allow you to move the window viewing area left or right and up or down.
   b. I will position the cursor to the right of the sentence where I want to add additional information. I will select the INSERT mode. Then, I will type the new text.
   c. If I want to replace the opening paragraph in my essay on 'whales', I will click INSERT on the status bar and change to the OVERTYPE mode. Then, I will place the cursor at the beginning of the paragraph and type over it.

d. The 'Undo' command is used to reverse the last command, whereas the 'Redo' command is used to reverse the 'Undo' action. For example, if I type some text, the Undo button can be used to delete the text, and the Redo button can be used to recover the text.

e. I would use the 'Copy' command instead of the 'Cut' command if I want to create a duplicate of the selected text, rather than simply move the text.

APPLICATION-BASED QUESTIONS

a. i. (a) Cut command (b) Copy command

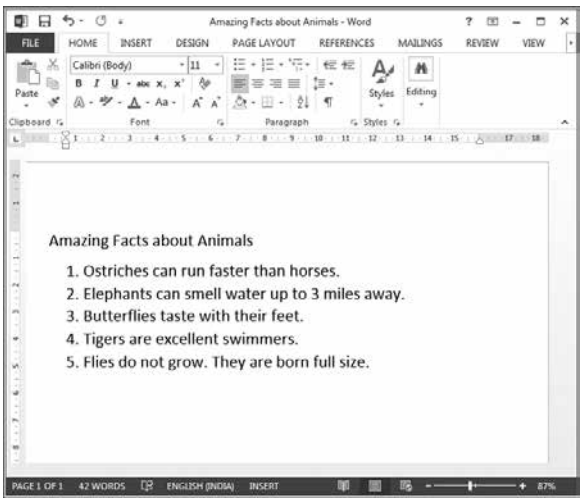
ii. **HOME** tab and **Clipboard** group

b. (a) Undo (b) Repeat (Redo)

These options are present in the Quick Access Toolbar.

IN THE LAB

1. a. The steps to create a new document are:
   i. Click the **File** tab.
   ii. Click **New** option in the left pane.
   iii. In the Right pane, select **Blank document**.



   b. Type the text as shown in the figure.
   c. The steps to save the document are:
      i. Click **Save** command on the **Quick Access Toolbar**.
      ii. In the screen that appears, click **Save As** option in the left pane.
      iii. In the center pane, select the location as **Computer**.
      iv. In the right pane, click **Browse**.
      v. The **Save As** dialog box appears.
      vi. Select the location where you want to save the file.
      vii. Type the file name in the filename box and click the **Save** button.

2. a. The steps to create a new document are:
   i. Click the **FILE** tab.
   ii. Click the **New** option in the left pane.
   iii. In the Right pane, select **Blank document.**
   b. Type the text as shown in the figure.
   c. The steps to save the document are:
      i. Click **Save** command on the **Quick Access Toolbar**.
      ii. In the screen that appears, click **Save As** option in the left pane.
      iii. In the center pane, select the location as **Computer**.
      iv. In the right pane, click **Browse**.
      v. The **Save As** dialog box appears.

vi. Select the location where you want to save the file.

vii. Type the file name in the filename box and click the **Save** button.

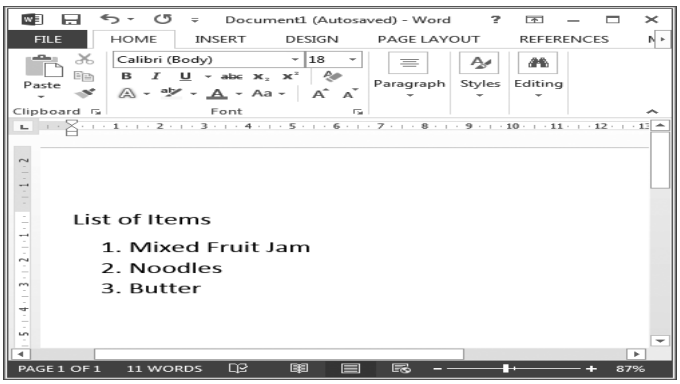
3. a. The steps to create a new document are:

i. Click the **File** tab.

ii. Click **New** option in the left pane.

iii. In the Right pane, select **Blank document**.

b. Type the text as shown in the figure.



c. The steps to save the document are:

i. Click **Save** command on the **Quick Access Toolbar**.

ii. In the screen that appears, click **Save As** option in the left pane.

iii. In the center pane, select the location as **Computer**.

iv. In the right pane, click **Browse**.

v. The **Save As** dialog box appears.

vi. Select the location where you want to save the file.

vii. Type the file name in the filename box and click the **Save**

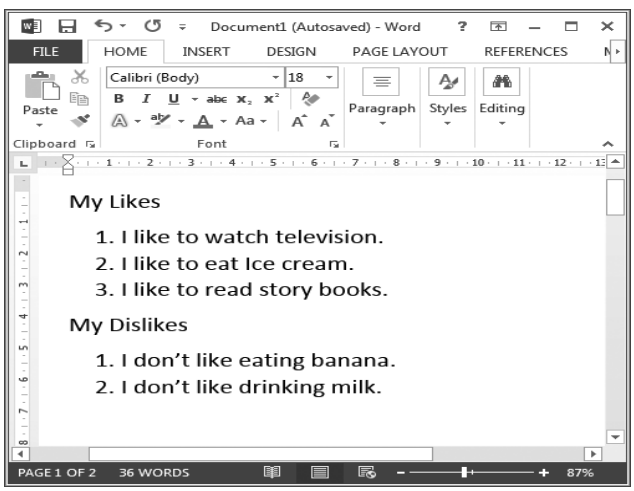
4. a. The steps to create a new document are:

i. Click the **File** tab.

ii. Click **New** option in the left pane.

iii. In the Right pane, select **Blank document**.

b. Type the text as shown in the figure.



c. The steps to save the document are:

i. Click **Save** command on the **Quick Access Toolbar**.

ii. In the screen that appears, click **Save As** option in the left pane.

iii. In the center pane, select the location as **Computer**.

iv. In the right pane, click **Browse**.

v. The **Save As** dialog box appears.

vi. Select the location where you want to save the file.

vii. Type the file name in the filename box and click **Save**.

GROUP PROJECT

Instruct your students to combine all their lists into a single document by copying and pasting. Again, they can use different fonts and colours to make their work look more presentable.

Chapter 7 Formatting Text in Word 2013

OBJECTIVE TYPE QUESTIONS

1. a. Justify b. character c. center d. Font e. Border

DESCRIPTIVE TYPE QUESTIONS

1. a. We can format the report by improving the appearance of the text by using various fonts, font colours, font sizes and font styles. We also need to use alignment to format a report.
   b. In order to change the font size, type, and colour we need to select the text first by using Ctrl + A.
   c. I would not consider using text effects when writing an application for sick leave to my principal because this is an official letter. It needs to be formal and no fancy fonts or effects can be used.
   d. We will use the highlighting tool to draw the attention of the readers towards the key points in our study notes.
   e.
   - I will type the text I want to include in the flyer.
   - Then, I will select Borders in the Paragraph group under the Home tab.
   - Next, I will choose a border of my choice from the Borders dialog box and choose a style from the Style list.
   - I will choose a colour for the lines from the drop-down color list.
   - I will specify the width of the line from the drop-down width list.
   - The Preview box will show me how the text looks with the borders I have created.

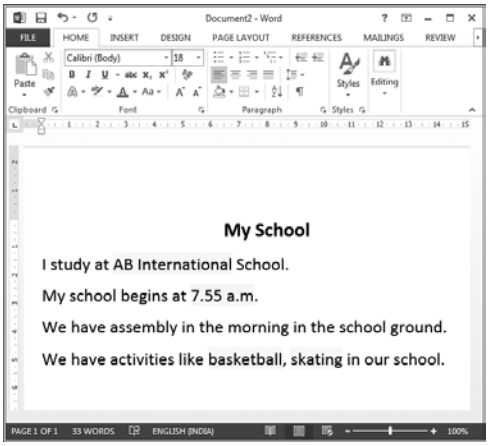
APPLICATION-BASED QUESTIONS

a. i. **Font** dialog box is shown in the figure.
   ii. Times New Roman font is selected.
   iii. **Bold Italic** option is selected in the **Font styles** box.
b. i. He can use the highlight feature.
   ii. **Font** group of **HOME** tab has the option for highlighting text.

IN THE LAB

1. a. The steps to create a new document are:
      i. Click the **File** tab.
      ii. Click **New** option in the left pane.
      iii. In the Right pane, select **Blank document**.
   b. Type the text as shown in the figure.
   c. To change the font, font size and color:
      a. Select the text.
      b. Click the **HOME** tab.
      c. In the font group:
         i. Click the drop-down arrow of the **Font** box and select the desired font.
         ii. Click the drop-down arrow of the **Font Size** box and select the font size from the drop-down list.
         iii. Click the drop-down arrow of the **Font Color** button and select the desired color.

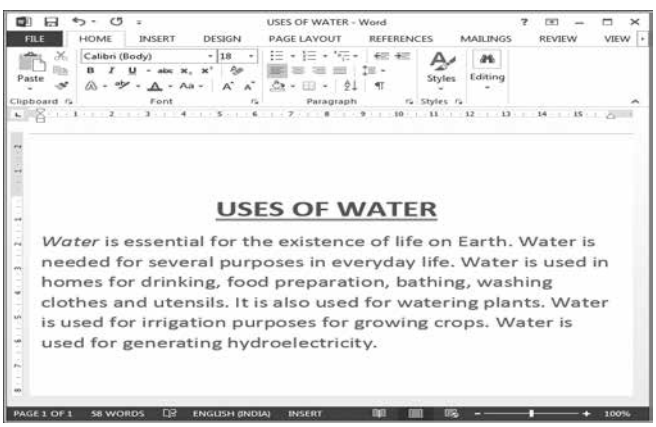
d. To center align the heading:
   i. Select the heading.
   ii. Click the **HOME** tab.
   iii. In the **Paragraph** group, click the **Center** button.



e. The steps to highlight the text are:
   i. Click the **HOME** tab.
   ii. In the **Font** group, click the drop-down menu arrow of the **Text Highlight Color** button and select the color you want.
   iii. The mouse pointer now changes to a pen shaped pointer.
   iv. Select the text you want to highlight. The text gets highlighted.

f. The steps to save the document are:
   i. Click **Save** command on the **Quick Access Toolbar**.
   ii. In the screen that appears, click **Save As** option in the left pane.
   iii. In the center pane, select the location as **Computer**.
   iv. In the right pane, click **Browse**.
   v. The **Save As** dialog box appears.
   vi. Select the location where you want to save the file.
   vii. Type the file name in the filename box and click **Save**.

2. a. The steps to create a new document are:
   i. Click the **File** tab.
   ii. Click **New** option in the left pane.
   iii. In the Right pane, select **Blank document**.



   b. Type the text as shown in the figure.
   c. To change the font, font size and color:
      i. Select the text.
      ii. Click the **HOME** tab.
      iii. In the font group:
         – Click the drop-down arrow of the **Font** box and select the desired font.
         – Click the drop-down arrow of the **Font Size** box and select the font size from the drop-down list.
         – Click the drop-down arrow of the **Font Color** button and select the desired color.
         – Click the **Bold**, **Italic**, or the **Underline** buttons, to make the text bold, italic, or underlined, respectively.
         – To change the underline style and a color, click the drop-down menu arrow of the **Underline** button and select a new style and/or color.
   e. To center align the heading:
      i. Select the heading.
      ii. Click the **HOME** tab.
      iii. In the **Paragraph** group, click the **Center** button.

f. The steps to highlight the text are:
   i. Click the **HOME** tab.
   ii. In the **Font** group, click the drop-down menu arrow of the **Text Highlight Color** button and select the color you want.
   iii. The mouse pointer now changes to a pen shaped pointer.
   iv. Select the text you want to highlight. The text gets highlighted.

g. The steps to save the document are:
   i. Click **Save** command on the **Quick Access Toolbar**.
   ii. In the screen that appears, click **Save As** option in the left pane.
   iii. In the center pane, select the location as **Computer**.
   iv. In the right pane, click **Browse**.
   v. The **Save As** dialog box appears.
   vi. Select the location where you want to save the file.
   vii. Type the file name in the filename box and click **Save**.

3. a. The steps to create a new document are:
   i. Click the **File** tab.
   ii. Click **New** option in the left pane.
   iii. In the Right pane, select **Blank document**.

b. Type the summary.

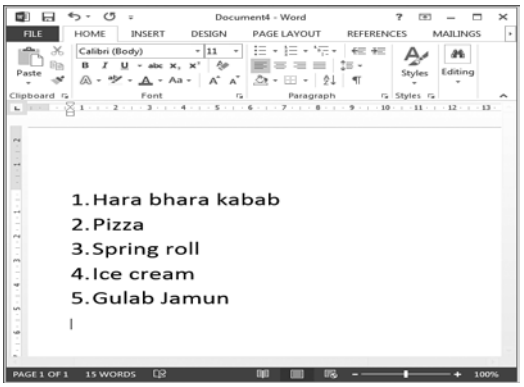
c. To change the font, font size and color:
   i. Select the text.
   ii. Click the **HOME** tab.
   iii. In the font group:
   – Click the drop-down arrow of the **Font** box and select the desired font.
   – Click the drop-down arrow of the **Font Size** box and select the font size from the drop-down list.
   – Click the drop-down arrow of the **Font Color** button and select the desired color.

d. To center align the heading:
   i. Select the heading.
   ii. Click the **HOME** tab.
   iii. In the **Paragraph** group, click the **Center** button.

e. To justify align the paragraph:
   i. Select the paragraph.
   ii. Click the **HOME** tab.
   iii. In the **Paragraph** group, click the **Justify** button.

f. The steps to save the document are:
   i. Click **Save** command on the **Quick Access Toolbar**.
   ii. In the screen that appears, click **Save As** option in the left pane.
   iii. In the center pane, select the location as **Computer**.
   iv. In the right pane, click **Browse**.
   v. The **Save As** dialog box appears.
   vi. Select the location where you want to save the file.
   vii. Type the file name in the filename box and click **Save**.

4. a. The steps to create a new document are:
    i. Click the **File** tab.
    ii. Click **New** option in the left pane.
    iii. In the Right pane, select **Blank document**.



  b. Type the list.
  c. To change the font, font size and color:
    i. Select the text.
    ii. Click the **HOME** tab.
    iii. In the font group:
      – Click the drop-down arrow of the **Font** box and select the desired font.
      – Click the drop-down arrow of the **Font Size** box and select the font size from the drop-down list.
      – Click the drop-down arrow of the **Font Color** button and select the desired color.
  d. To center align the heading:
    i. Select the heading.
    ii. Click the **HOME** tab.
    iii. In the **Paragraph** group, click the **Center** button.
  e. To apply border and shading to the list:
    i. Select the list.
    ii. Click the **HOME** tab.
    iii. In the **Paragraph** group, click the drop-down arrow of the **Border** button and click **Border and Shading.**
    iv. The **Borders and Shading** dialog box appears.
    v. The steps to apply a border are as follows:
      – Click the **Borders** tab.
      – Choose the desired settings to apply.
      – Now, select the style from the **Style** scroll list. Style determines the type of line used for the border.
      – From the **Color** drop-down list, select the color for the line.
      – From the **Width** drop-down list, specify the width of the line.
      – The **Preview** box shows how the border will be applied to the selected text.
    vi. The steps to apply shading are as follows:
      – Click the **Shading** tab.
      – Select the color for the shading from the **Fill** drop-down list.
      – Select the shading style you want to apply from the **Style** drop-down list.
      – The effect of the selection appears in the **Preview** box.
    vii. Click **OK**. The border and shading chosen will be applied to the selected text.
  f. The steps to save the document are:
    i. Click **Save** command on the **Quick Access Toolbar**.
    ii. In the screen that appears, click **Save As** option in the left pane.
    iii. In the center pane, select the location as **Computer**.

iv. In the right pane, click **Browse**.
v. The **Save As** dialog box appears.
vi. Select the location where you want to save the file.
vii. Type the file name in the filename box and click **Save**.

5. Nawabzaada Khan Liaquat Ali Khan (October 1, 1896–October 16, 1951)

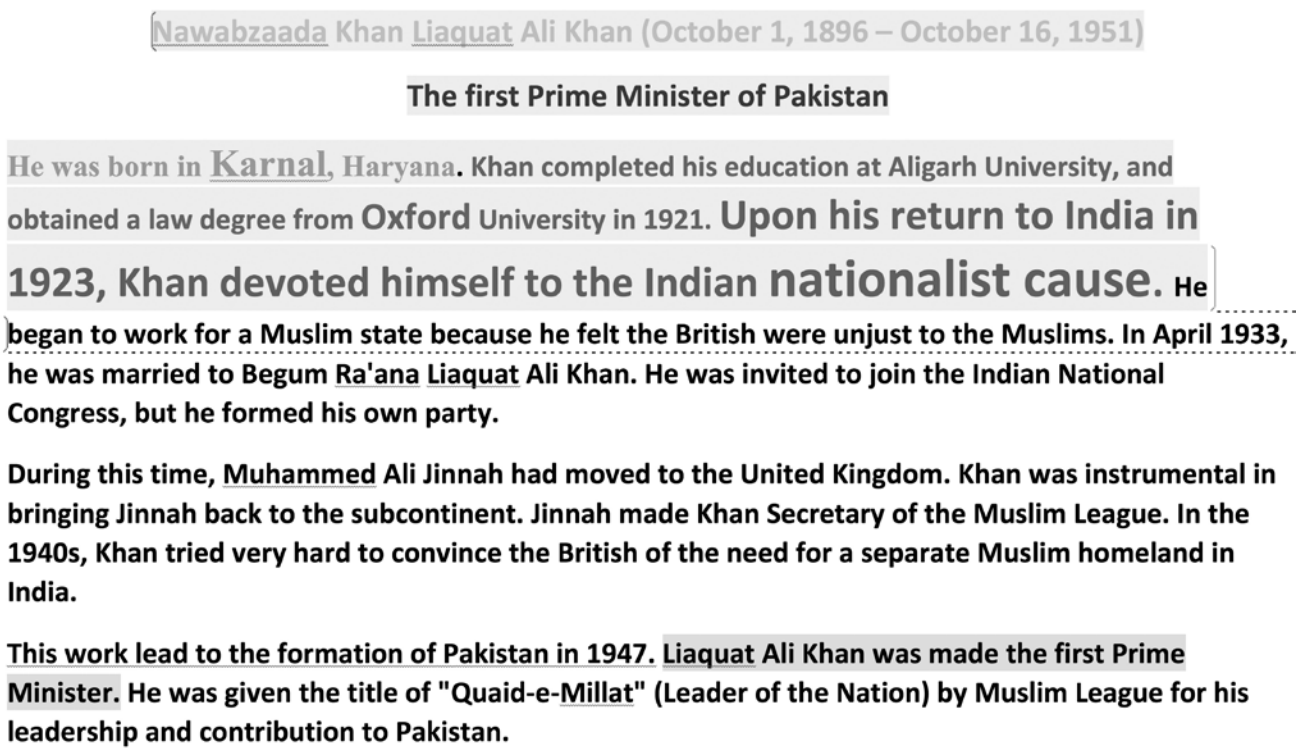
   The first Prime Minister of Pakistan

   He was born in Karnal, Haryana. Khan completed his education at Aligarh University, and obtained a law degree from Oxford University in 1921. Upon his return to India in 1923, Khan devoted himself to the Indian nationalist cause. He began to work for a Muslim state because he felt the British were unjust to the Muslims. In April 1933, he was married to Begum Ra'ana Liaquat Ali Khan. He was invited to join the Indian National Congress, but he formed his own party.

   During this time, Muhammed Ali Jinnah had moved to the United Kingdom. Khan was instrumental in bringing Jinnah back to the subcontinent. Jinnah made Khan Secretary of the Muslim League. In the 1940s, Khan tried very hard to convince the British of the need for a separate Muslim homeland in India.

   This work lead to the formation of Pakistan in 1947. Liaquat Ali Khan was made the first Prime Minister. He was given the title of "Quaid-e-Millat" (Leader of the Nation) by Muslim League for his leadership and contribution to Pakistan.

6. A sample format is given belwo:



Note: Please ensure that the students have used the right colours.

GROUP PROJECT

Instruct students to be as creative as possible. Explain to them the importance of fair and equal participation so they must take turns in formatting and decorating the poster.

Examples of messages may be as follows:

a. Stop Smoking! Start Breathing!

b. Save Water! Recycle Paper! Protect your World!

Include a small written message explaining the dangers attached to these awareness messages. Be brief and to the point. Use powerful images to convey your message.

Chapter 8 Enjoy with Tux Paint

OBJECTIVE TYPE QUESTIONS

1. a. drawing b. open c. bottom d. text e. undo

2. a. iii. Save b. iii. Shapes c. i. Brush d. iii. Quit e. ii. Redo

DESCRIPTIVE TYPE QUESTIONS

1. a. The different parts of the main screen of the Tux Paint program are the toolbar, the drawing canvas, the selector, a palette, and the help area. Their functions are as follows:
   - The toolbar on the left hand of the main screen of Tux Paint has drawing and editing tools.
   - The drawing canvas in the centre of the screen is used for drawing purposes.
   - The selector on the right hand side of the screen shows various sizes of available brushes.
   - A palette of colours is below the drawing canvas.
   - The help area at the bottom of the screen displays information and tips about the selected tool whilst drawing on the canvas.

   b. The disadvantage of opening Tux Paint in full screen is that some menu options are not visible.

   c. We would use the Print tool on the left hand side of the main screen if we need assistance in printing out the picture on the drawing canvas.

   d. The Paint tool allows us to draw the following on the canvas:
   - stars
   - arrows
   - any other image freehand

   e. Drawing a tree with the trunk, branches, and leaves will require me to use lines with varied thickness.

APPLICATION-BASED QUESTIONS

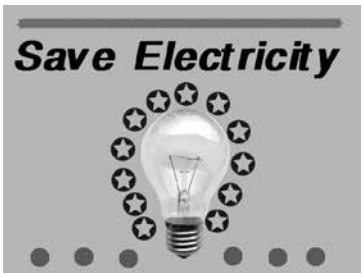
a. Text tool is used to write "Snowman". **Shapes** tool is used to draw the face and body of the snowman.

b. i. Eraser ii. Magic

IN THE LAB

1. i. Double-click the Tux Paint icon on the Desktop.
   ii. The Title screen appears. Press any key. The Main screen appears.
   iii. Click the New button. The list of background and starter images appears.
   iv. Double-click the pink background.

v. Write the Text 'Save Electricity' using the Text tool.
vi. Place a picture of a bulb using the Stamp tool
vii. Draw a line of red colour using the Line tool.
viii. Using the Paint tool, draw stars, and circles on the drawing.
ix. Finally, use the Save tool to save your picture.



2. a. i. Double-click the **Tux Paint** icon on the **Desktop**.
ii. The **Title** screen appears. Press any key. The **Main** screen appears.
iii. Click the **New** button. The list of background and starter images appears.
iv. Double-click the white background.
v. Use the **Shapes** tool, draw the face, cap, eyes, hand, body, and the legs.
vi. Use the **Magic** tool, fill the desired colour in the shapes.
vii. Finally, use the **Save** tool to save your picture.

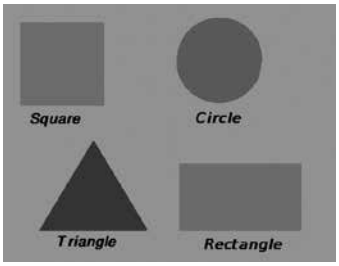
b. i. Double-click the **Tux Paint** icon on the **Desktop**.
ii. The **Title** screen appears. Press any key. The **Main** screen appears.
iii. Click the **New** button. The list of background and starter images appears.
iv. Double-click the white background.
v. Use the **Shapes** tool and draw cap, face, eyes and the nose.
vi. Use the **Magic** tool, to fill the desired colour.
vii. Use the Paint tool, to draw within the cap, the nose, the mouth, and the portion below the face.
viii. On the right side use the **Fill** tool and click at the required closed figure.
ix. Finally, use the **Save** tool to save your picture.

c. i. Double-click the **Tux Paint** icon on the **Desktop.**
ii. The **Title** screen appears. Press any key. The **Main** screen appears.
iii. Click the **New** button. The list of background and starter image appears.
iv. Double-click the black background.
v. Use the **Paint** tool and draw a boat, water stream, and the birds with the required colour.
vi. Use the **Magic** tool to fill the closed figure with the required colour.
vii. Finally, use the **Save** tool to save your picture.

3. i. Double-click the **Tux Paint** icon on the **Desktop**.
ii. The **Title** screen appears. Press any key. The **Main** screen appears.
iii. Click the **New** button. The list of background and starter images appears.
iv. Double-click the green background.
v. Write the Text as shown in the figure using the **Text** tool.
vi. Using the **Stamp** tool, place the picture of fruits on the drawing.
vii. Finally, use the **Save** tool to save your picture.

4. i. Double-click the **Tux Paint** icon on the **Desktop**.
ii. The **Title** screen appears. Press any key. The **Main** screen appears.
iii. Click the **New** button. The list of background and starter images appears.

iv. Double-click the blue background.
v. Draw a Square, a Circle, a Triangle and a Rectangle of different colors using the **Shapes** tool.
vi. Write the Text 'Square', 'Circle', 'Triangle', and 'Rectangle' using the **Text** tool.
vii. Finally, use the **Save** tool to save your picture



5. Follow the steps below to create a drawing of your dream school:
   a. Click on the Tux Paint program (windowed) as in full screen some options are not available.
   b. The main screen appears with the drawing canvas.
   c. First, click on Magic and use the Bricks tool to create the school building. Click first on the large bricks to create layers of large bricks and then add layers of thinner bricks.
   d. Create windows with the bricks to create rectangular white spaces.
   e. Choose green from the Colors bar. Use the Confetti tool to create grass in front of the school building.
   f. Use the Shape tool to add a circle-shaped sun in the sky.
   g. Use the Paint tool to create a blue sky.
   h. Use the Chalk tool in Magic to create effects of clouds in the sky.
   i. Make a tree on the side of the school building with the help of the Paint tool.

GROUP PROJECT

a. Click on the Tux Paint program (windowed) as in full screen some options are not available.
b. The main screen appears with the drawing canvas.
c. Use the Shapes tool to create circles of different sizes to create the planets.
d. Add an ellipse to one of the circles to create the rings of Saturn.
e. Add some stars.
f. Use the Colors bar to fill in colours.
g. Make the picture as attractive as possible.

Cyber Olympiad Questions

1. d. both a and b
2. d. both a and c
3. b. 200,200
4. d. both a and b
5. a. `pencolor 255, 0, 0`
6. d. all of the above
7. a. `spriteshow, spritehide`
8. b. `fontsize`
9. d. `penwidth`
10. a. `go`
11. d. all of the above
12. c. Drawing Canvas
13. a. Paint
14. c. Text
15. d. Bottom
16. d. all of the above
17. b. 17
18. b. `ccl`
19. d. all of the above
20. d. Either a or b

21. c. Software
22. a. Hardware
23. a. Printer
24. c. Operating System
25. b. Windows NT
26. c. Home
27. a. Redo
28. b. Full Screen
29. a. Undo
30. b. Flip
31. a. Status bar
32. a. Double-click
33. b. Ctrl + X
34. c. any one of (a) or (b)
35. a. Editing
36. a. Borders
37. b. Font
38. a. Justify
39. a. Italics
40. b. alignment

Revision Questions

1. Editor
2. The different speeds at which the commands in KTurtle can be executed are–Full Speed, Slow, Slower, Slowest, and Step-by-Step.
3. Type the command in **Console** text box and click **Execute** button.
4. Yes, in the first set of commands it moves by 60 degrees and then by 120 degrees. Overall, it moves by 180 degrees. In the second case, it first moves by 60 degrees and then by 180 degrees from the starting position.
5. a. iii b. iv c. i d. ii
6. Commands to draw a rectangle of breadth 60 units and length 100 units are:

```
fw 60
tr 90
fw 100
tr 90
fw 60
tr 90
fw 100
tr 90
```

7. KTurtle window has many windows on it. Docking means to place the mouse on the title bar of the window, press the left mouse button and drag it to any corner of the KTurtle window.
8. F5
9. **Save As**
10. To save the image, click **Canvas** menu and select **Export to Image (PNG)** option. The **Save As Picture** dialog box appears. Select the drive and folder. Type the File name and click the **Save** button.
11. Slow, Slower, or Slowest
12. If you are not sure of how many degrees a turtle should move, click Direction chooser option of **Tools** menu. The **Direction Chooser** dialog box appears:
    a. Choose the Command type.
    b. Previous direction shows the position of the turtle in degrees.
    c. Choose the New direction in degrees or drag the turtle to the new position.

d. The command will appear in the text box on the left.
e. Click **Paste to editor** button. The command will appear in the Editor pane.
f. Click the **Close** button.

13. If you do not know the RGB numbers of any color, do the following:
    a. Click **Tools** menu.
    b. Select **Color Picker** option.
    c. The Color Picker dialog box appears.
    d. You can move the slider for red, green, and blue, and the corresponding colour will appear. The RGB numbers will appear in a text box on the left.
14. `fontsize`
15. The five areas of the Tux Paint window are Drawing canvas, Toolbar, Selector, Color palette, and Help area.
16. Click the 18th color pallet on the right. This will open the colour box. Click the colour you want. This colour will appear in 18th color pallet.
17. Up arrow
18. Magic tool
19. Eraser tool
20. Undo
21. Windows NT is a multi-user operating system.
22. Microsoft Windows is the most popular operating systems.
23. Single-user and multi-user operating systems.
24. Word 2013 and PowerPoint 2013 are two commonly used software.
25. Single-user operating systems are generally used at home. Multi-user operating systems are used in offices and big organizations like banks.
26. An operating system is a software that helps the computer hardware to work with other computer software. It helps a user to get an output from the computer.
27. Icons are the small pictures on the desktop which represent a file, a folder, a program, or a software.
28. **Start** button is used to start any program.
    It is present at the left corner of the **Taskbar**.
29. A folder is used to store a group of files.
30. Cut — Ctrl + X, Paste — Ctrl + V
31. **HOME** tab displays the options for **Copy** and **Paste**.
32. The steps to set the drawing as a Desktop background are:
    a. Open the drawing.
    b. Click the Paint button and then point to **Set as desktop background** option.
    c. Select any one of the three options: **Fill**, **Tile** or **Center**.
33. **Zoom In** option is used to increase the zoom level of the drawing.
34. **Full Screen** option is available on clicking **VIEW** tab.
35. **Copy** and **Paste** options are used to get a duplicate of the selected part of the drawing.
36. **New** and **Save** options are available on clicking the **FILE** tab.
37. The Backspace key is used to delete a character to the left of the cursor.

38. Ctrl + Y
39. To select a paragraph, triple-click anywhere in the paragraph.
40. Copying means to create a duplicate of the selected text.
    Moving means to move the selected text from one position to another.

WORKSHEETS

- Worksheets have been provided for all the chapters of the course book.
- Each worksheet is of 15 marks and is recommended as a formative assessment paper.
- It is possible to use these worksheets as they are by photocopying them in magnified size (120% approx.) and distributing to the students.
- The questions in the worksheets may also be used as samples to create your own additional worksheets.
- They are also available as printable documents in **digital resources.**

....

Chapter 1 Operating System

1. Jumbled Words (5)

Unjumble the letters to form words using the hints given.

a. BKDEOARY …….

(Hint: A device with keys used to enter data into a computer.)

b. RSEFWOTA ……..

(Hint: Set of programs that performs some tasks in a computer.)

c. EANP …….

(Hint: The **Start** menu is divided into two …….)

d. AKTSRBA ……

(Hint: The long horizontal bar at the bottom of the screen.)

e. SICNO …….

(Hint: Small pictures on the monitor screen.)

2. Figure Speak

Identify the following figures: **(5)**

a. 

b. 

c. 

d. 

.....

e. 

.....

3. Who Am I? (5)

Identify what is being talked about from the hint given.

a. I am the part of a computer that you can touch or feel.

b. I am used to store a group of files.

c. I am the screen that appears after loading the Windows operating system.

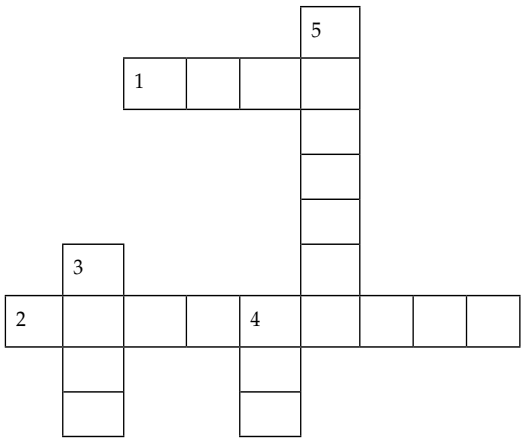
d. I am used to store any piece of information.

e. I am the software that helps the computer hardware to work along with the other computer software.

Chapter 2 More About Paint

1. Crossword (5)

Complete the crossword based on the clues given.



ACROSS

1. This command is used to reverse the last action performed.
2. This option is clicked to select the whole picture.

DOWN

3. **Undo** and ……. buttons are available on the **Quick Access Toolbar**.
4. You can use this option to cut the selected object.

....

5. You can use this option to see a smaller view of your image.

2. Who am I?

Identify what is being talked about from the hint given. **(5)**

a. I am the option used to see a larger view of an image.

b. I am the tool that can be used to select a drawing or part of a drawing.

c. I am the option to be clicked in the **Resize** area to set the new size.

d. I am the tab used to view your drawing in full screen.

e. I am the checkbox to be selected in the **Resize and Skew** dialog box in order to resize a drawing.

3. Word Search **(5)**

Search for the following four words related to Paint in the grid below.

IMAGE, CLIPBOARD, DISPLAY, PASTE, SKEW

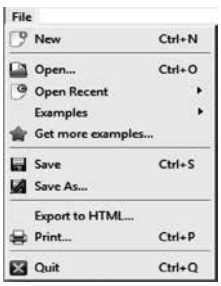
A	D	F	J	T	Y	U	I	O	P	L	K	C	R	S	X	H	K	L	C	R	S
I	S	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	P	Y
M	A	C	L	I	P	B	O	A	R	D	F	P	R	U	K	G	W	Q	I	A	D
A	S	X	U	B	M	E	T	B	I	E	Q	U	V	G	E	T	Y	V	U	S	W
G	J	L	B	X	O	P	G	S	H	T	M	K	A	B	W	H	F	D	S	T	Q
E	T	R	P	Y	O	J	K	Z	L	I	N	D	F	L	X	I	P	U	L	E	C
U	F	A	E	G	V	Q	W	D	I	S	P	L	A	Y	L	K	S	C	X	N	M

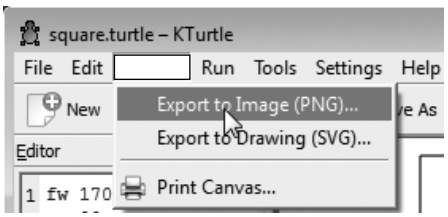
Chapter 3 Let's Learn KTurtle

1. Figure Speak

Label the parts marked in the figure/Identify the following figures: **(5)**

a. 

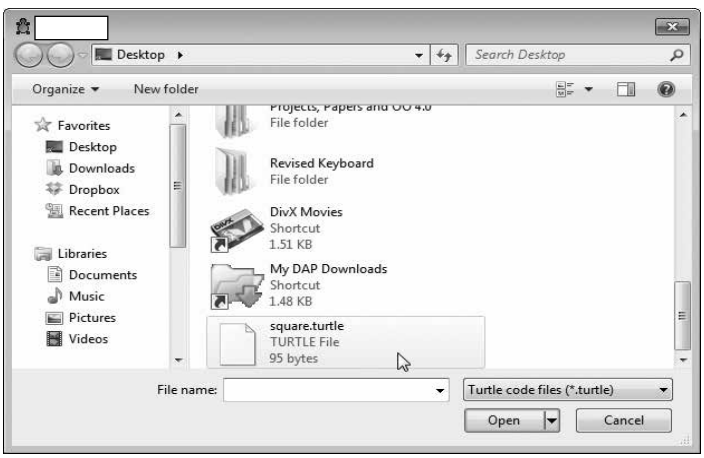
b. 

c. 

....

d. 

.....

e. 

.....

2. Jumbled Words

Unjumble the letters to form words using the hints given. **(5)**

a. NASVCA …….

(Hint: Space in the middle of the screen where the turtle moves to make drawing.)

b. NOOSCEL ……

(Hint: Text box where you can enter a one-line command and press enter to run it.)

c. TUXEECE …….

(Hint: To run a command press **ENTER** key or click …… button.)

d. RAFWROD ……..

(Hint: Command used to move the turtle in the forward direction.)

e. EUASP …….

(Hint: Command to stop the execution temporarily.)

3. Word Search

Search for the following five words related to KTurtle in the grid below. **(5)**

ABORT, TURNRIGHT, STATUSBAR, SETTINGS, INSPECTOR PANE

A	D	F	J	T	Y	U	I	O	S	E	T	T	I	N	G	S	K	L	C	R	S
I	S	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	P	Y
E	A	B	L	F	P	B	O	I	E	D	F	P	R	U	Z	G	W	Q	I	K	D
W	S	O	U	B	M	E	T	B	S	T	A	T	U	S	B	A	R	V	U	J	W
Q	J	R	B	X	O	P	G	S	H	T	M	K	A	B	E	H	F	D	S	M	Q
C	T	T	U	R	N	R	I	G	H	T	N	D	F	L	X	I	P	U	L	E	C
U	F	I	N	S	P	E	C	T	O	R	W	I	N	D	O	W	S	C	X	N	M

Chapter 4 KTurtle Commands

1. Who am I?

Identify what is being talked about from the hint given. **(5)**

a. I am the command that turns the head of the turtle towards the left side.

b. I am the dialog box that can be used to know the RGB value of a particular colour.

c. I am the command that will clean all drawings on the canvas.

d. I am the command which sets the width of the pen.

e. I am the unit to measure a turn by the turtle.

2. Give three facts about the following: **(3 × 2 = 6)**

a. `reset` command b. `forward` command

3. Word Search **(4)**

Search for the following four words related to KTurtle in the grid below.

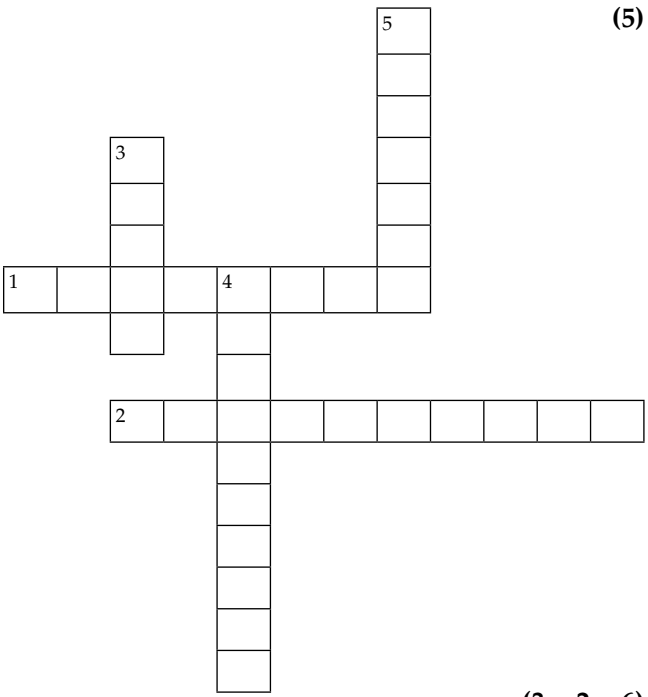
PENCOLOR, DIRECTION, PARAMETER, FUNCTION

A	D	I	R	E	C	T	I	O	N	R	Q	T	G	H	J	M	K	L	C	R	S
I	S	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	P	Y
E	A	C	L	F	P	B	O	I	E	D	F	U	N	C	T	I	O	N	I	K	D
W	S	V	U	B	M	E	T	B	N	B	A	Z	X	S	F	L	R	V	U	J	W
Q	J	D	P	E	N	C	O	L	O	R	M	K	A	B	E	H	F	D	S	M	Q
C	T	T	P	L	Y	R	C	G	E	H	N	D	F	L	X	I	P	U	L	E	C
U	F	I	P	A	R	A	M	E	T	E	R	F	N	D	U	I	S	C	X	N	M

Chapter 5 Writing and Math in KTurtle

1. Crossword **(5)**

Complete the crossword based on the clues given.



ACROSS

1. This command takes one input which should be a number.
2. These type of operators mostly take two inputs.

DOWN

3. This command is used to write any text or number on the canvas where the turtle sits.
4. This command is used to make the turtle visible after it has been hidden.
5. This command is used to give some information by displaying the text you have typed.

2. Give three facts about the following: **(3 × 2 = 6)**

a. `Ask` command

b. Arithmetic operators in KTurtle

3. Jumbled Words **(4)**

Unjumble the letters to form words using the hints given.

a. DHSPRETIIE ……

(Hint: Command used to hide the turtle so that it becomes invisible.)

b. TIPNR ……

(Hint: Command used by the turtle to write any number or text on the canvas.)

c. DMMOCNA ……

(Hint: Set of instructions given to the turtle to be executed.)

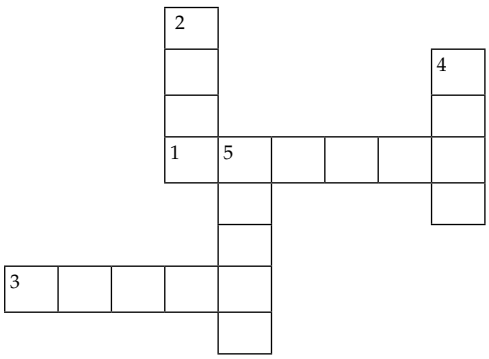
d. SSEEAGM ……..

(Hint: Command used to give some information by displaying the text you have typed.)

Chapter 6 Editing Text in Word 2013

1. Crossword **(5)**

Complete the crossword based on the clues given.



ACROSS

1. This key is pressed to delete the character to the right of the cursor.
3. This command places the copied text at the position where the cursor is placed.

DOWN

2. This is a very popular word processing software.
4. This toolbar is located to the right of the status bar.
5. Blank lines can be inserted in an already existing document by pressing this key.

2. Give three facts about the following: **(3 × 2 = 6)**

a. Repeat command

b. Selection bar

3. Word Search **(4)**

Search for the following four words related to Word 2013 in the grid below.

RIBBON, OVERTYPE, BACKSPACE, INSERT

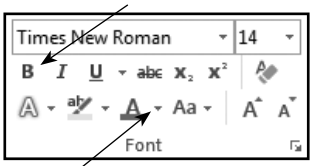
A	D	F	J	T	Y	U	I	O	V	E	R	T	Y	P	E	Q	K	L	C	R	X
I	I	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	B	Y
E	N	P	L	F	P	B	O	I	E	D	F	P	R	U	Z	G	W	Q	I	E	D
W	S	O	U	B	M	E	T	B	A	C	K	S	P	A	C	E	R	V	U	O	W
Q	E	Y	B	X	O	P	G	S	H	T	M	K	A	B	E	H	F	D	S	R	Q
C	R	I	B	B	O	N	E	G	Q	R	N	D	F	L	X	I	P	U	L	S	C
U	T	I	L	H	D	G	P	T	I	K	W	V	N	D	F	W	S	C	X	E	M

Chapter 7 Formatting Text in Word 2013

1. Figure Speak **(5)**

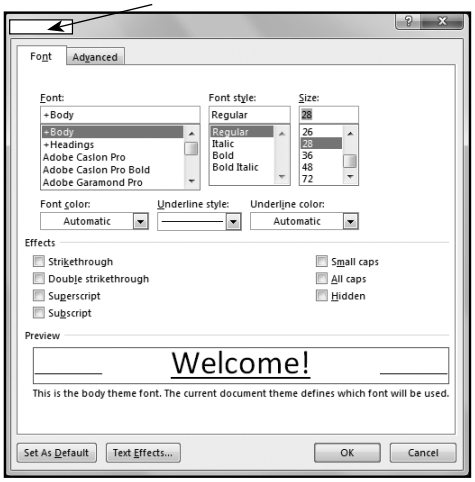
Label the parts marked in the figure./Identify the following figures:

a. 1. .....

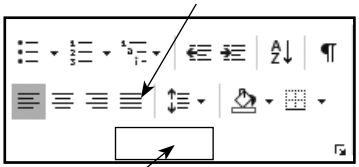


2. .....

b. .....

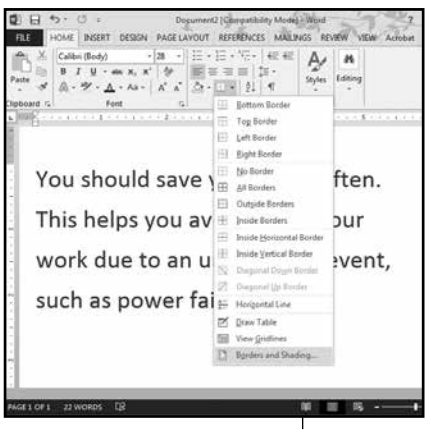


c. 1. .....



2. .....

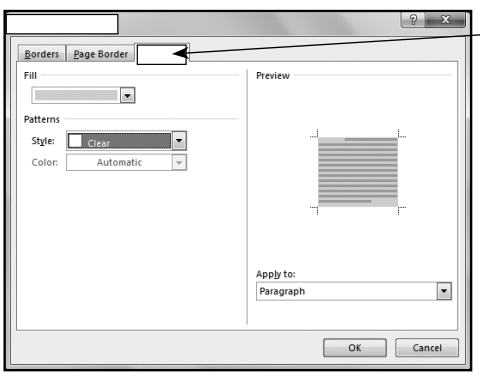
d.



.....

.....

e.



2. .....

2. Give three facts about the following **(3 × 2 = 6)**

a. Font dialog box

b. Alignment

3. Jumbled Words **(4)**

Unjumble the letters to form words using the hints given.

a. LCTAII …….

(Hint: Command to make the text slanted.)

b. HTHHGGLII ……..

(Hint: It means to make the text look different to draw the reader's attention towards it.)

c. EEIURNNLD …….

(Hint: Command to draw a line under your text.)

d. NAILG ……..

(Hint: To change the manner in which text is placed between the margins of a page.)

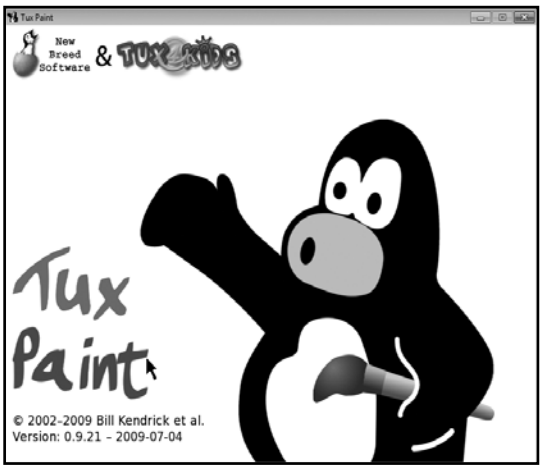
Chapter 8 Enjoy with Tux Paint

1. Figure Speak **(5)**

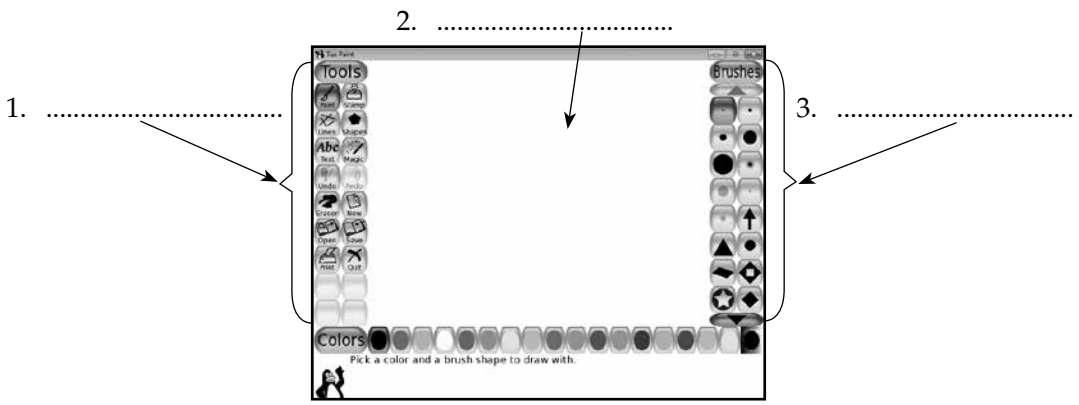
Label the parts marked in the figure./Identify the following figures:

a.

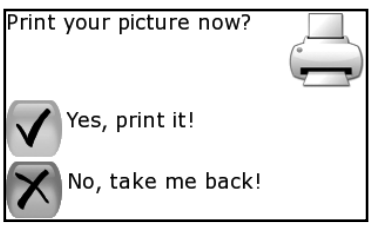
b.



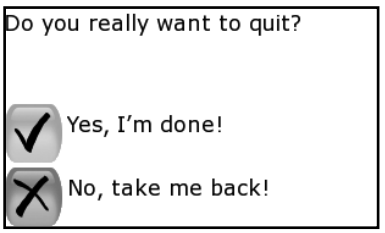
c.



d.



e.



2. Who Am I? **(4)**

Identify what is being talked about from the hint given.

a. I am present at the center of the main screen where you draw your figures.

b. I am present at the bottom of the main screen, and provide tips and other information about the selected tool while drawing on the canvas.

c. I am the tool that lets you draw some simple, filled, and unfilled figures in Tux Paint.

d. I am the tool that lets you add different kinds of special effects to your drawing.

3. Give three facts about the following: **(3 × 2 = 6)**

a. **Open** tool

b. **Undo** and **Redo** tool

Worksheet Answers

Chapter 1 Operating System

1. a. KEYBOARD b. SOFTWARE c. PANE
   d. TASKBAR e. ICONS
2. a. Keyboard b. CPU c. Monitor
   d. Taskbar e. **Figure**: **Start** menu **Label**: 1. **Start** button
3. a. Hardware b. Folder c. Desktop
   d. File e. Operating system

Chapter 2 More About Paint

1.

					[5]Z			
			[1]U	N	D	O		
						O		
						M		
						O		
	[3]R					U		
[2]S	E	L	E	[4]C	T	A	L	L
	D				U			
	O				T			

2. a. Zoom in b. Select tool c. Pixels d. View e. Maintain aspect ratio

3.

A	D	F	J	T	Y	U	I	O	P	L	K	C	R	S	X	H	K	L	C	R	S
I	S	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	P	Y
M	A	C	L	I	P	B	O	A	R	D	F	P	R	U	K	G	W	Q	I	A	D
A	S	X	U	B	M	E	T	B	I	E	Q	U	V	G	E	T	Y	V	U	S	W
G	J	L	B	X	O	P	G	S	H	T	M	K	A	B	W	H	F	D	S	T	Q
E	T	R	P	Y	O	J	K	Z	L	I	N	D	F	L	X	I	P	U	L	E	C
U	F	A	E	G	V	Q	W	D	I	S	P	L	A	Y	L	K	S	C	X	N	M

Chapter 3 Let's Learn KTurtle

1. a. KTurtle icon b. **File** menu on the **Menu bar** c. **Canvas** menu
   d. Toolbar e. **Open** dialog box
2. a. CANVAS b. CONSOLE c. EXECUTE
   d. `FORWARD` e. `PAUSE`
3.

A	D	F	J	T	Y	U	I	O	S	E	T	T	I	N	G	S	K	L	C	R	S
I	S	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	P	Y
E	A	B	L	F	P	B	O	I	E	D	F	P	R	U	Z	G	W	Q	I	K	D
W	S	O	U	B	M	E	T	B	S	T	A	T	U	S	B	A	R	V	U	J	W
Q	J	R	B	X	O	P	G	S	H	T	M	K	A	B	E	H	F	D	S	M	Q
C	T	T	U	R	N	R	I	G	H	T	N	D	F	L	X	I	P	U	L	E	C
U	F	I	N	S	P	E	C	T	O	R	W	I	N	D	O	W	S	C	X	N	M

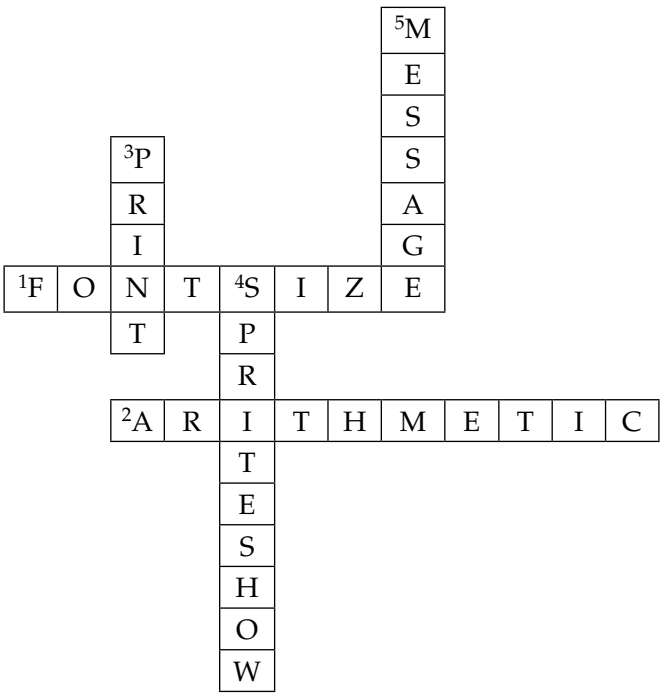
Chapter 4 KTurtle Commands

1. a. `turnleft` b. Color Picker c. `clear` d. `penwidth` or `pw` e. Degree
2. a. `Reset` command
   i. This command will clean all drawings on the canvas.
   ii. It brings the turtle back to the middle of the screen.
   iii. There is no short form of **`reset`** command.
   b. `Forward` command
   i. This command is used to move the turtle in the forward direction, in the direction of its head.
   ii. The short form for this command is `fw`.
   iii. You can move a turtle backward by giving a negative input to the `fw` command
3.

A	D	I	R	E	C	T	I	O	N	R	Q	T	G	H	J	M	K	L	C	R	S
I	S	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	P	Y
E	A	C	L	F	P	B	O	I	E	D	F	U	N	C	T	I	O	N	I	K	D
W	S	V	U	B	M	E	T	B	N	B	A	Z	X	S	F	L	R	V	U	J	W
Q	J	D	P	E	N	C	O	L	O	R	M	K	A	B	E	H	F	D	S	M	Q
C	T	T	P	L	Y	R	C	G	E	H	N	D	F	L	X	I	P	U	L	E	C
U	F	I	P	A	R	A	M	E	T	E	R	F	N	D	U	I	S	C	X	N	M

Chapter 5 Writing and Math in KTurtle

1.



2. a. `Ask command`

   i. This command allows you to enter a number or text

   ii. The command starts with $n

   iii. The question text is typed in double quotes

   b. Arithmetic operators in KTurtle

   i. The Arithmetic operators used in KTurtle are + (Add), – (Subtract),* (Multiply), /(Divide), and ^ (Power).

   ii. These operators can be used with `print`, `forward`, `backward`, `turnright`, `turnleft`, `direction` and `go` commands.

   iii. They mostly take two inputs.

3. a. `SPRITEHIDE` b. `PRINT` c. Command d. `MESSAGE`

Chapter 6 Editing Text in Word 2013

1.

		[2]W							
		O						[4]V	
		R						I	
		[1]D	[5]E	L	E	T		E	
			N					W	
			T						
[3]P	A	S	T	E					
				R					

2. a. Repeat command

   i. The Repeat command is used to reverse the action of Undo command.

   ii. The Repeat button is present on the Quick Access Toolbar.

   iii. CTRL+Y is the shortcut key for Repeat command.

   b. Selection bar

   i. The Selection bar is the space between the left edge of the page and the text margin.

   ii. It can be used to select the text.

   iii. The entire document can be selected by triple-clicking the selection bar.

3.

A	D	F	J	T	Y	U	I	O	V	E	R	T	Y	P	E	Q	K	L	C	R	X
I	I	A	C	S	E	Z	G	A	S	B	S	J	G	R	S	T	F	I	H	B	Y
E	N	P	L	F	P	B	O	I	E	D	F	P	R	U	Z	G	W	Q	I	E	D
W	S	O	U	B	M	E	T	B	A	C	K	S	P	A	C	E	R	V	U	O	W
Q	E	Y	B	X	O	P	G	S	H	T	M	K	A	B	E	H	F	D	S	R	Q
C	R	I	B	B	O	N	E	G	Q	R	N	D	F	L	X	I	P	U	L	S	C
U	T	I	L	H	D	G	P	T	I	K	W	V	N	D	F	W	S	C	X	E	M

Chapter 7 Formatting Text in Word 2013

1. a. **Figure: Font** group

   Label: 1. Bold Style 2. Font color

   b. **Figure: Font** dialog box

   c. **Figure: Paragraph** group of the **HOME** tab

   Label: 1. **Justify** Align

d. **Border** menu in the **Paragraph** group

e. **Figure: Shading** tab of the **Borders and Shading** dialog box

Label: 1. Shading tab 2. Preview box

2. a. Font dialog box

i. The font dialog box can be opened from the Font group.

ii. If we click the Font dialog box launcher icon, a dialog box opens that provides more options to format the text

iii. CTRL+D is the shortcut key to open the Font dialog box

b. Alignment

i. Alignment is the manner in which text is placed between the margins of a page.

ii. You can have your text lined up at the left side, at the center, or at the right side of the page.

iii. The required alignment button—**Align Text Left**, **Center**, **Align Text Right**, or **Justify** can be clicked in the **Paragraph** group on the **HOME** tab.

3. a. ITALIC b. HIGHLIGHT c. UNDERLINE d. ALIGN

Chapter 8 Enjoy with Tux Paint

1. a. Tux Paint icon on the desktop

b. Title screen of Tux Paint

c. **Figure:** Main screen of Tux Paint

Label: 1. Toolbar 2. Drawing Canvas 3. Selector

d. **Print** dialog box

e. **Quit** dialog box

2. a. **Drawing Canvas** b. **Help Area** c. **Shapes** tool d. **Magic** tool

3. a. **Open** tool

i. This tool is used to load a picture that has been saved earlier.

ii. Clicking this button will show a list of all the pictures you have saved.

iii. Ctrl + O is the shortcut key to use this tool.

b. **Undo** and **Redo** tool

i. Clicking **Undo** cancels the last drawing action.

ii. Clicking **Redo** reverses the action of **Undo.**

iii. **Ctrl + Z** is the shortcut key for **Undo** and **Ctrl + Y** is the shortcut key for **Redo.**

TEST PAPERS

- Test papers have been provided for all the chapters of the course book.
- Each test paper is of **20 marks** and has both theory (**15**) and practical (**5**) components.
- The test papers may be used for pen and paper assessment or the questions in them could be used to create your own assessment papers.
- They are also available as printable documents in **digital resources.**

Chapter 1 Operating System

A. Fill in the blanks with the correct words. **(5)**

1. ..... refers to the parts of a computer that you can touch or feel.
2. A set of programs that performs some tasks in a computer is called .....
3. Each file is known by an…….
4. A ..... operating system allows only one user to work on it at a time.
5. Any piece of information stored in the computer is in the form of a ..... .

B. Write T for the true statement and F for the false one. **(5)**

1. Monitor and keyboard are examples of computer software.
2. A computer can be used without an operating system.
3. MS-DOS and Windows XP are examples of multi-user operating systems.
4. Each file is given a filename that is useful to identify it.
5. The **Start** button is present at the left corner of the taskbar.

C. Very Short Answer Questions **(2)**

1. What is an operating system?
2. Define taskbar.

D. Short Answer Questions **(8)**

1. Write the steps required to change the position of the taskbar to any of the four sides on the screen.
2. What is the **Start** menu and what does it contain? Explain in detail.
3. What is a software? Give an example of a popular software.
4. Define a multi-user operating system. Give one example.

Chapter 2 More About Paint

A. Fill in the blanks with the correct words. **(5)**

1. **Undo** and **Redo** buttons are available on the ..... **Toolbar.**
2. The ..... command twists the drawing in the horizontal or vertical direction.
3. The ..... option is used to get a duplicate of the selected part of a drawing.
4. You can use the ..... option to increase or decrease the size of a drawing.
5. You can use the ..... tool to change the angle of the whole, or selected part, of the drawing.

B. Write T for the true statement and F for the false one. **(5)**

1. Paint is a simple drawing program and one of the most commonly used applications in Windows.
2. When you cut a selected part, the area that is cut is replaced with the background colour.
3. You cannot paste an existing picture file into Paint.
4. You cannot set a picture as a desktop background.
5. We need to click on the **View** tab to increase or reduce the zoom level.

C. Very Short Answer Questions **(5)**

1. Which option will you use to select everything in a picture except for the currently selected area?
2. When you click the **Resize** option in the **Image** group which dialog box opens?
3. What does the **Skew** command do?
4. In which group do we have the option to rotate a drawing?
5. How will you view a drawing in full screen?

D. Lab exercise: **(5)**

Rabi wants to draw a picture of a morning scene outside his home. Help him draw its picture in Paint and resize it by reducing the size by 25 percent.

Chapter 3 Let's Learn KTurtle

A. Fill in the blanks with the correct words. **(5)**

1. The ..... is used to draw lines on the canvas.
2. ..... panel is used to type KTurtle programming commands.
3. The ..... is used to test the command without modifying the contents of the Editor pane.
4. The commonly used commands are available on the ..... .
5. The main window of KTurtle has three main parts: Editor, Canvas and the .....

B. Write T for the true statement and F for the false one. **(5)**

1. KTurtle is used to draw only figures.
2. The Editor and Inspector pane cannot be detached and placed anywhere on the desktop
3. The status bar shows the current language being used for the commands
4. The Open command is used to create a new file
5. **Status bar** is present at the bottom of the screen and gives you the state of KTurtle.

C. Very Short Answer Questions **(5)**

1. What is meant by a command in KTurtle?
2. Where do you type in your commands in KTurtle?
3. Where is the Console textbox present?
4. Which speed option carries out the commands one at a time?
5. Which key should be pressed on the keyboard to execute commands?

D. Lab exercise: **(5)**

Sonia wants to draw a square having dimensions 50 x 50 using KTurtle. Can you help her in this task? The image is to be saved by the name 'square.png'.

Chapter 4 KTurtle Commands

A. Fill in the blanks with the correct words. **(5)**

1. You should give a single space between the ..... and the number of steps.
2. You can also move the turtle forward by giving a ..... input to the `bw` command.
3. The ..... command moves the turtle forward by X steps.
4. The ..... command turns the turtle by X degrees to the right.
5. The ..... command sets the color of the canvas.

B. Write T for the true statement and F for the false one. **(5)**

1. The center command brings the turtle to the center of the canvas by drawing a line.
2. You cannot change the size and colour of the canvas.
3. The short form of penwidth command is `pw`.
4. You can use the **Color Picker** dialog box to know the RGB value of a particular color.
5. The clear command will clean all the drawings on the canvas and also bring the turtle back to the middle of the screen.

C. Very Short Answer Questions **(5)**

1. How can you move the turtle backward by using the `fw` command?
2. What is the short form of the `direction` command?
3. What does RGB stand for?
4. What command is used to set the size of the pen?
5. What is the short form of the `reset` command?

D. Lab exercise: **(5)**

Akram has been given a task by his teacher to draw a blue colour triangle using KTurtle. The width of the sides should be 10 units, the color of the canvas should be red and the canvas size should be 200 x 200. After the drawing is complete, the turtle should be at the center of the canvas.

Can you help Akram do this task?

Chapter 5 Writing and Math in KTurtle

A. Fill in the blanks with the correct words. **(5)**

1. The size of the font is set in .....
2. The short form of **spritehide** command is .....
3. To print any text using the `print` command, it should be enclosed within .....
4. Arithmetic operators mostly take ..... inputs.
5. The command `fw` 13* 5 will move the turtle forward by ..... units.

B. Write T for the true statement and F for the false one. **(5)**

1. The **`fontsize`** command takes two inputs.
2. The short form of **`spriteshow`** command is **`sr`**.
3. The command `tr` 130+20 will turn the turtle left by 150 degrees.
4. Arithmetic operators can also be used with the `go` command.
5. The **`ask`** command should be followed by an " = " sign.

C. Very Short Answer Questions **(5)**

1. Which command is used to write text or numbers in KTurtle?
2. What is the turtle also known as?
3. What is the symbol for the multiplication operator?
4. What does the command `direction 120 - 60` do?
5. How many inputs do arithmetic operators take?

D. Lab exercise: **(5)**

Seema wants to write a code in KTurtle that asks a user to enter his/her name (say Farhan) and print the message "Hello, Farhan! Nice to meet you!" Help Seema complete this task.

Chapter 6 Editing Text in Word 2013

A. Fill in the blanks with the correct words. **(5)**

1. ..... is making changes to the text.
2. ..... means to add text to an already existing document.
3. Blank lines can be inserted in an already existing document by pressing the ..... key.
4. ..... is used to cut the selected text.
5. The **Undo** command is used to ..... the action of the last command.

B. Write T for the true statement and F for the false one. **(5)**

1. The **View** toolbar is located to the left of the status bar.
2. There are five ways to view a document in Word 2013.
3. You can type and replace the current text with a new text in the Overtype mode
4. You can use CTRL + A to select the contents of an entire document
5. A duplicate of the text can be created using the **Cut** and **Paste** commands.

C. Very Short Answer Questions **(5)**

1. How can you select an entire line of text using the mouse?
2. What does 'editing' mean?
3. What is the keyboard shortcut to select an entire Word document?
4. Which mode should be used to replace existing text with a new one?
5. Where are the **Undo** and **Repeat** buttons found?

D. Lab exercise: **(5)**

Komal has to create an Word 2013 document with the following text:

Microsoft Word is a word processor developed by Microsoft. It was first released in 1983 under the name 'Multi-Tool Word' for Xenix systems.

MS Word is a popular word processing software. You can create letters, memos, and newsletters in MS Word very easily.

Can you help her to create the document? Also help her in performing the following tasks:

a. Select the word Microsoft and make it bold.
b. Insert a blank line before the line 'MS Word is a popular….'
c. Insert the word 'documents' before the word 'letters' in the last line.

Chapter 7 Formatting Text in Word 2013

A. Fill in the blanks with the correct words. **(5)**

1. The ..... settings are pre-defined in a software
2. Font sizes are measured in units called .....
3. The default font colour in Word 2013 is .....
4. ..... is the manner in which text is placed between the margins of a page
5. ..... is making the text look different to draw the reader's attention.

B. Write T for the true statement and F for the false one. **(5)**

1. The keyboard shortcut to open the **Font** dialog box is SHIFT+D.
2. On selecting a colour from the **Text Highlight Color** menu, the mouse pointer changes to a pen-shaped pointer.
3. You cannot remove the highlight colour from the text
4. The height of letters or other characters is measured by the font size.
5. Text can be left-aligned and right-aligned but not center-aligned, in a document.

C. Very Short Answer Questions **(5)**

1. Which option will you click to remove highlighting from a piece of text?
2. Which keyboard shortcut is used to right-align text?
3. Which group on the **HOME** tab has the options to align your text?
4. Which option helps you add a shadow or a glow to your text?
5. In the **Borders and Shading** dialog box how many tabs do you see?

D. Lab exercise: **(5)**

Azra has been given a task by her teacher to create an MS Word document with the following text :

Mountain Ranges of India

India has seven major mountain ranges having peaks of over 1000 metres. India has some of the highest mountain ranges in the world. The Great Himalayan mountain range is the highest mountain range in the world. Kanchenjunga is the highest mountain peak in India and the third highest in the world. Nanda Devi is the second highest mountain peak in India.

Help her create the document and also to perform the following tasks :

a. Change the font and font size of the heading to Arial and 14, respectively.
b. Apply shadow effect to the heading.

Chapter 8 Enjoy with Tux Paint

A. Fill in the blanks with the correct words. **(5)**

1. You get two choices while opening Tux Paint- ..... and .....
2. The Toolbar contains drawing and ..... tools.
3. On clicking the 18th colour in the colour palette, a ..... is displayed.
4. A blinking line appears on clicking the ..... tool
5. A ..... is a background with an outline of the image or a 3D photograph.

B. Write T for the true statement and F for the false one. **(5)**

1. You cannot start Tux paint in Full Screen
2. The **Shapes** tool lets you draw straight lines.
3. The keyboard shortcut to save the current drawing is CTRL +S.
4. The **Print** tool is used to print the picture on a printer.
5. You cannot Undo/Redo more than once

C. Very Short Answer Questions **(5)**

1. Which colour on the colour palette can you change?
2. Where is the Selector present?
3. Which tool helps you add different kinds of special effects to your drawing?
4. What's the keyboard shortcut to redo an action?
5. Which button is used to close Tux Paint?

D. Lab Exercise: **(5)**

Akram wants to surprise his mother on Mother's Day by giving her a greeting card. He wants to design it using Tux Paint. Can you help him?

Test Paper Answers

Chapter 1 Operating System

A. 1. Hardware 2. Software 3. Icon 4. Single-user 5. file

B. 1. F 2. F 3. F 4. T 5. T

C. 1. An operating system is a software that helps the computer hardware to work with the computer software.

2. The taskbar is a long horizontal bar at the bottom of the screen. It contains buttons with icons which represent the programs that are open in the system.

D. 1. You can change or move the position of the taskbar to any of the four sides on the screen. The steps required to change it to, say, the right side of the screen are as follows:

Step 1: Move the mouse pointer to an empty space on the taskbar.

Step 2: Click and hold the mouse button.

Step 3: Drag the mouse pointer to the right of the computer screen.

Step 4: Release the mouse button.

The taskbar would have moved to the right of the computer screen.

The **Start** button is used to start any program. Clicking the **Start** button displays a menu called the **Start** menu.

2. The **Start** menu is divided into two panes—the left pane and the right pane.

The Left Pane of the Start Menu shows a list of recently opened programs.

The Right Pane of the Start Menu provides access to commonly used folders, files, settings, and features.

3. Software refers to a set of programs (a set of instructions given to a computer) that performs some tasks in a computer. MS Office is an example of a popular software.

4. A multi-user operating system allows many people to use the same computer at the same time or at different times.

An example of a multi-user operating system is UNIX.

Chapter 2 More About Paint

A. 1. Quick Access; 2. Skew; 3. Copy; 4. Resize; 5. Rotate

B. 1. T 2. T 3. F 4. F 5. T

C. 1. We will use the **Invert Selection** option in the **Select** tool menu.

2. When we click the **Resize** option in the **Image** group the **Resize and Skew** dialog box opens.

3. The **Skew** command twists the drawing in the horizontal or the vertical direction.

4. The Image group has the option to rotate a drawing.

5. To view a drawing in full screen we will click the Full screen option in the Display group on the View tab.

D. Solution:

a. Draw the picture using various tools in Paint.

b. To resize the picture:

i. Click the Home tab. Click the Select option and then drag the pointer to select the picture.

ii. In the Image group, click the Resize option. The Resize and Skew dialog box appears. Select the Maintain aspect ratio check box.

iii. In the Resize area, click the Pixels option.

iv. Type the new width or the new height in the Horizontal and Vertical boxes, respectively.

v. Click the OK button.

Chapter 3 Let's Learn KTurtle

A. 1. Turtle; 2. Editor; 3. Console; 4. Toolbar; 5. Inspector pane

B. 1. F 2. F 3. T 4. F 5. T

C. 1. A command in KTurtle means to give an order or instruction.

2. Commands are typed in the **Editor** pane in KTurtle.

3. The Console textbox is present on the toolbar.

4. The Step-by-Step option carries out the commands one at a time.

5. The F5 key should be pressed on the keyboard to execute commands.

D. Solution:

a. Click on the KTurtle icon on the desktop.

b. Click on the *New* button on the toolbar.

c. Click inside the Editor panel and type the following commands. Press the ENTER key after each command.

```
fw 50
tr 90
fw 50
tr 90
fw 50
tr 90
fw 50
tr 90
```

d. A square will be displayed on the canvas.

e. To save the image, click on the **Canvas** menu and select Export to Image(PNG).

f. In the Save As dialog box, type the filename as 'Square' and click Save.

Chapter 4 KTurtle Commands

A. 1. command; 2. negative; 3. forward or fw; 4. turnright or tr; 5. canvascolor or cc

B. 1. F 2. F 3. T 4. T 5. F

C. 1. The turtle can be moved backward using the `fw` command by adding a negative number to it. For example, `fw` –40 will move the turtle backward by 40 steps.

2. The short form of the `direction` command is `dir`.

3. RGB stands for Red, Green, and Blue.

4. The `penwidth` command is used to set the size of the pen.

5. The `reset` command does not have a short form.

D. Solution:

a. In the Editor window, type the following set of commands :

```
reset
canvascolor 255,0,0
canvassize 200,200
pencolor 0,0,255
penwidth 10
tr 30
fw 150
tr 120
fw 150
tr 120
fw 150
tr 90
```

Click the Run button.

Chapter 5 Writing and Math in KTurtle

A. 1. units; 2. **sh**; 3. " " (Double quotes); 4. two; 5. 65

B. 1. F 2. F 3. F 4. T 5. T

C. 1. The `print` command is used to write text or numbers in KTurtle.

2. The turtle is also called a sprite.

3. The symbol for the multiplication operator is "*".

4. The command `direction 120 - 60` turns the turtle right by 60 degrees

5. Arithmetic operators usually take two inputs.

D. Solution:

a. Enter the program code in the Editor pane:

```
$n =  ask "Please enter your name."
message "Hello, "+ $n + "Nice to meet you!"
```

b. Run the program.

c. Enter your name.

d. Click on **OK**.

The message you have typed is displayed on the screen.

Chapter 6 Editing Text in Word 2013

A. 1. Editing; 2. Insert; 3. ENTER; 4. CTRL + X; 5. Reverse

B. 1. F 2. F 3. T 4. T 5. F;

C. 1. A line of text can be selected by clicking the selection bar to the left of the line once.
2. Editing means making changes to a piece of text.
3. The keyboard shortcut to select an entire Word document is **CTRL+A**.
4. The **Overtype** mode should be used to replace existing text with a new one.
5. The **Undo** and **Redo** (Repeat) buttons are found on the **Quick Access Toolbar**.

D. Solution:
a. Start Word 2013.
b. Type the text given above.
c. Save the file.
d. Double-click the word 'Microsoft'.
e. In the **Font** group of the **HOME** tab, click on Bold.
f. To insert a blank line, place the cursor after the word 'Xenix systems' and press the ENTER key.
g. To insert the word 'documents', first check whether the INSERT mode is selected. If the OVERTYPE button appears on the status bar, change it to INSERT by clicking on it.
h. Now place the cursor before the word 'letters' and type the word 'documents'.

Chapter 7 Formatting Text in Word 2013

A. 1. **default**; 2. points; 3. **black**; 4. Alignment; 5. Highlighting

B. 1. F 2. T 3. F 4. T 5. F

C. 1. We will click the **No Color** option in the **Text Highlight Color** menu to remove highlighting from a piece of text.
2. The keyboard shortcut Ctrl + R is used to right-align text.
3. The **Paragraph** group on the **HOME** tab has options to align our text.
4. The **Text Effects** option allows us to add a shadow or a glow to our text.
5. Three tabs are seen in the **Borders and Shading** dialog box: **Borders**, **Page Border**, and **Shading**.

D. Solution:
a. Start Word 2013.
b. Type the text given.
c. Save the file.
d. To change the font and font size, select the heading.
e. Click the HOME tab.
f, In the Font group, click the drop-down arrow of the Font type box and select Arial.
g. Click the drop-down arrow of the font size box and select 14.
h. To apply shadow effect to the heading, click the Text Effects button and select the shading option.

Chapter 8 Enjoy with Tux Paint

A. 1. Full Screen and Windowed; 2. Editing; 3. Color box;
4. Text; 5. Starter image

B. 1. F 2. F 3. T 4. T 5. F

C. 1. We can change the 18th color on the color palette.
2. The **Selector** is present on the right side of the main screen.
3 .The **Magic** tool helps us to add different kinds of special effects to our drawing.
4. The keyboard shortcut to redo an action is Ctrl + Y.
5. The **Quit** button is used to close Tux Paint.

D. Solution:

a. Double-click the **Tux Paint** icon on the desktop.
b. The title screen appears. Press any key. The main screen appears.
c. Click the **New** button. The list of background colours and starter images appears.
d. Double-click the light blue background.
e. Select the **Magic** tool and using the **Flower** option, draw a red color flower.
f. Then by changing the colours in the palette at the bottom of the screen, draw more flowers in the lower half of the screen.

g. Select the **Text** tool and type "HAPPY MOTHER'S DAY!" on top of the flowers.
h. Click on the **Save** tool to save the card.
i. Click on the **Print** tool to print the card

Notes

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