



CANDY TREE

INFORMATION TECHNOLOGY

A Book on Computer Education

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HELP-KIT

6-8

- v Windows 10
- v Basic Language
- v Corel Draw
- v Photoshop
- v MS-Office





1 Computer System

Exercise

A. Tick (3) the correct option :

Ans. 1. c. 2. c. 3. c. 4. b.

B. Fill in the blanks :

- Ans.**
1. A **mouse** is also called a pointing device.
 2. It captures pictures and text from papers and makes their **digital** copy.
 3. QR code is the short form for **Quick Response** code.
 4. A **digital camera** is used to capture images or videos and store them in a digital format.

C. State 'True' or 'False':

Ans. 1. True 2. False 3. True 4. True

D. Answer the following questions.

- Ans.**
1. A computer is an electronic device that stores, recovers, processes and does programming of data and instructions. It consists of hardware and software. It exists in different sizes and configurations. A computer normally :
 - Inputs the data from the mouse and the keyboard.
 - Processes the data from the CPU and the memory.
 - Outputs the result on the monitor screen.
 - Saves the data on storage devices such as the hard disk.
 2. Devices through which data and instructions are entered into a computer are called input devices. An input device converts these instructions and data into electrical signals that are recognized by the computer.
 3. Graphic tablet is an input device used to create drawings.
 4. A QR code is a two-dimensional code that consists of an array of black and white squares. QR code is a short form for Quick Response code. You must have noticed QR codes on business cards, billboards, products and so on.
 5. A touchscreen is a touch-sensitive computer display screen that can also act as an input device. It can identify the presence and position of a touch within the display region.
Touchscreens are easy to use and are often found in public places such as ATMs, ticket collection terminals, theatres and airports. It is used extensively in design of appliances such as mobile phones.

Lab Activity

Ans. Do it yourself.



2 Computer Memory



Exercise

A. Tick (3) the correct option :

Ans. 1. a. 2. c. 3. d. 4. c.

B. Fill in the blanks :

- Ans.**
1. ROM is **non-volatile** memory as it retains the contents even when the power is switched off.
 2. DOS is an example of **operating system**.
 3. **Application** software is a set of programs necessary to carry out the operations for a specified application.
 4. A hard disk consists of a **spindle** that holds one or more disks called platters.

C. State 'True' or 'False' :

Ans. 1. True 2. True 3. False 4. True 5. False

D. Answer the following questions :

Ans. 1. **Compile :** It is a language translator that translates the high-level language program into machine language (computer language). It converts the entire program in one go and reports all the errors of the program along with their line numbers at the end. For example, C language has a compiler.

2. Application software is a set of programs necessary to carry out operations for a specified application. These are the programs written by programmers to enable computers to perform a specific task.

3. **RAM**—It stands for Random Access Memory.

i. The CPU (Central Processing Unit) uses this memory while processing information.

ii. This is also called read/write memory.

iii. This memory is temporary in nature.

ROM—ROM is the computer memory on which data has been pre-recorded. Once data has been written onto a ROM chip, it cannot be erased and can only be read. ROM is a non-volatile memory as it retains the contents even when the power is switched off.

4. **Primary Memory**—It is the main part of a computer and determines the size and number of programs (software) that can be stored in a computer as well as the amount of data that can be processed.

Secondary Memory—Secondary memory differs from the primary memory by the fact that the CPU cannot use this memory directly while processing the information.

5. Utilities are those application programs that assist a computer by performing housekeeping functions like backing up disk or scanning/cleaning viruses or arranging information etc. They ensure the smooth functioning of a computer.

Some important utilities are text editor, used for creating and editing text files, backup utilities that facilitates the backing-up of disks, compression utility that facilitates compression of files, disk

defragmentation utility that attempts to minimise the fragmentation on your disk, and antivirus software that ensures a virus-free environment.

Lab Activity

Ans. Do it yourself.



3 Programming Languages



Exercise

A. Tick (3) the correct option :

Ans. 1. c. 2. a 3. b

B. Fill in the blanks :

- Ans.**
1. Basically, computers perform operations on **objects**.
 2. Most programming languages describe computation in an **imperative** style.
 3. Object-Oriented (OO) languages are the **most** common these days.
 4. BASIC combines both programming and computer control into a **single** interface.
 5. You will need to put CLS at the very top of your program to **clear** the screen before you print anything.

C. State 'True' or 'False':

- Ans.**
1. True 2. False 3. True 4. True
 5. False 6. False 7. False

D. Define the following :

- Ans.**
1. **Programming language :** A programming language is a language which is used to express a set of instructions in such a manner that the computer can understand and follow its instructions.
 2. **Procedural languages :** Procedural languages are the type of computer programming languages that specify a series of well-structured steps and procedures with in their programming context to compose a program.
 3. **Stack Languages :** Stack-based language is are one-in which a stack, implicitly accessed by most operations, is a fundamental part of the programming model.
 4. **QuickBASIC**—It is the origin of all modern BASICS. A few people have spurred a cult for the language, as many games and tutorials based on QuickBASIC are available on the Internet.
 5. **DarkBASIC**—A significant commercial variant of BASIC, which utilizes the DirectX library and is great for writing games quickly.
 6. **QBASIC Editor**—If you've used your computer to do school work or write a report, you'll notice that most of the ending keys (<Backspace>, <Delete>, <Insert>...) work just the way they always do. In case you haven't used these keys before, here's a list :

<Backspace> Removes the character to the left of the cursor

<Delete> Removes the character at the cursor

<Left Arrow>	Moves the cursor left
<Right Arrow>	Moves the cursor right
<Up Arrow>	Moves the cursor up
<Down Arrow>	Moves the cursor down
<Home>	Moves the cursor to the start of a line
<End>	Moves the cursor to the end of a line

E. Answer the following questions :

Ans.

1. A computer language is a language which is used to express a set of instructions in such a manner that the computer can understand and follow these instructions.
2. Object-oriented (OO) languages are the languages in which objects bundled together values and commands in a single entity programs, and collections of interacting objects.
3. OO language can be seen as an attempt to solve the problems that was experienced with procedural language, where changing values could introduce subtle bugs that were difficult to track down. In practice, it is possible to program in an 'OO style' with many procedural languages. This can be done simply by following careful conventions or it can involve exploiting other language features to enforce encapsulation. In C, for example structs can be used with function pointers to create ad-hoc object.

The general idea is that each object manages its own values using the code in its methods, to change the values in a separate object the method is that object should be called.

The idea that each object is uniquely responsible for managing its own values is called encapsulation.

4. Functional languages are considered more declarative than, OO or procedural ones, and lazy evaluation also helps. The idea can be taken further by automating the process of searching for a solution to relationships defined by the programmer. In other words, a program consists of a list of desired relationships; executing the program is equivalent to finding a solution that satisfies all the relationships.

There are various ways in which this can be implemented, depth or breadth first search, or by enumerating all possibilities. Some languages allow the programmer to improve efficiency and/or control memory use by, for example, indicating where backtracking is not needed.

- | | | |
|------------|----------|--------|
| 5. FORTRAN | Scheme | CLOS |
| LISP | CSP | Oberon |
| APL | dBASE II | |
| BASIC | Ada | |

6. Types of BASIC can be divided into several groups, on the basis of their usage and ability such as:

Their platform (Windows, Linux, etc.)

Their application/purpose (games, GUI applications, etc.)

Their ability to be compiled or interpreted

7. QBASIC, a shareware is a limited version of the commercial software QuickBASIC. While QBASIC is shareware, QuickBASIC is commercial software.
8. To get started with QBASIC, follow these steps :
 - Step 1.** Start Command Prompt : On Windows desktop, click on Start button then type CMD in Search file and Programs input box. CMD will be on the top of the menu.
 - Step 2.** Click on CMD, Command Prompt will be appearing. Write QBASIC and Press Enter key, if you get a blue screen with something about a 'Survival Guide', you made it! Now QBASIC Window is visible to you. If instead you got something about a 'Bad command or file name', you need to get QBASIC installed on your machine.
Go ahead and press the <Esc> key to 'clear this dialog box' when it asks you to.

Lab Activity

Do it yourself.



4 More About Windows 8



Exercise

A. Tick (3) the correct option :

Ans. 1. b. 2. a. 3. c.

B. Fill in the blanks :

- Ans.**
1. Press the **Window + C** key to open charms menu to the right of the screen.
 2. To navigate through the **Start screen**, either click on and drag the scroll bar at the bottom of the screen.
 3. The **Lock screen** is also called the Welcome screen.

C. State 'True' or 'False' :

Ans. 1. False 2. True 3. False

D. Answer the following questions :


- Ans.**
1. The functions of the Windows Start button have been replaced with a new Start screen-colored tiles that are shortcuts to programs and live widgets that report data from those programs. For example, on the Weather app, you can see the current temperature and forecast. On the Mail app, you can see how many unread e-mail messages you have and view reminders for upcoming events.

The new Start screen gives you a larger desktop by expanding the borders left and right.

2. You can customize your Start screen by changing the name or appearance of a group of tiles, and then organize your Start screen by creating new groups for frequently used or similar apps.

3. **Customizing The Lock Screen**

The steps of customizing the Lock screen are :

Step 1: Press the Windows () + C key. The charms menu opens up to the right of the screen.

Step 2: Click on the Settings.

Step 3: Click on the Change PC settings, and then click on Lock screen.

Step 4: You can change the desktop background picture by choosing one of the pictures available in your computer, or you can browse your computer for a picture.

Step 5: You can also view a Slide Show on the Lock screen. Move the slider to the ON position and then select a picture source.

Step 6: In the Lock screen apps area, you can choose which app you want to run in the background to provide status and notifications.

4. The Lock screen (also called the Welcome screen) covers the sign-in screen and displays the date and time, as well as notifications for email, calendar, and other apps. You can customize the lock screen by changing the picture and choosing which apps display notifications.

Lab Activity

Do it yourself.



5 Multimedia Applications in Windows



Exercise

A. Tick (3) the correct option :

- Ans.** 1. d. 2. c. 3. a. 4. c. 5. a.






B. Fill in the blanks :

- Ans.**
1. **Sound card** is used to record sounds in computer.
 2. Windows multimedia tool, **Windows Sound Recorder** is used for recording and playing the recorded sounds in computer.
 3. **Media Player** is a versatile windows multimedia application used to play sound as well as video CD's.
 - d. **Volume Control** dialog box is used to adjust volume of the different sound devices.

C. State 'True' or 'False':

- Ans.** 1. True 2. True 3. False 4. False 5. True

D. Match the following :

- | | | |
|-------------|--|------------------|
| Ans. | 1.  | b. Record |
| | 2.  | c. Play |
| | 3.  | e. Stop |
| | 4.  | a. Seek to start |
| | 5.  | d. Seek to end |

E. Very short answer type questions :

- Ans.**
1. Digital camera 2. Macromedia Flash
 3. Multimedia Technology

F. Short answer type questions :

Ans.

1. Multimedia is a combination of two words : Multi and Media. Multi means 'many' and Media means 'modes of communication'. So, multimedia is a computer technology which enables their machine to communicate in various modes like, text, graphics, sounds, movies and animations.
2. A multimedia computer can play audio and video files on it. To do this, it needs some additional hardware. For playing audio and video files, apart from the CD-drive which is now an essential component of the computer, it needs a sound card, a graphics card and speakers.
3. Multimedia has made the computer popular among all segments, from a child to an adult, because of its extensive applications like :
Entertainment : Think of cartoon films or movies like, Stuart Little, Jurassic Park, Spiderman, Godzilla, etc. which are the examples of multimedia technology. The 3-D games you play on computer are also the examples of multimedia.
Education : The various educational CD's available on different subjects have made the studies more interactive and interesting by adding animation and sound in them.
Advertising : This technology is widely used nowadays to make TV ads in a more attractive manner.
Business : It helps a businessman to take attractive presentations to display their product information to its customers in a more interactive manner.
4. To record the sound :
 - a. Connect a microphone to your computer.
 - b. Click New option in the File menu.
 - c. Click the Record button to start recording and speak in front of the microphone.
 - d. To stop recording click Stop button.
 - e. To save the recorded sound, click Save option in the File menu.
Your sound file will be saved with extension .WAV.
5. To start Media Player :
Click Start → Programs → Accessories → Entertainment → Windows Media Player
6. To run audio or video files stored in your computer :
 - a. Choose Open option in the File menu of Windows Media Player.
Open dialog box is displayed.
 - b. Browse the audio/video file stored in the computer.
 - c. Click on Open button to start the selected song or movie.
7. Click Start → Programs → Accessories → Entertainment → Volume Control.
Volume Control dialog box appears using which you can control the sounds of your computer multimedia applications like CD-player,

DVD player, Sound Recorder, etc. Adjust the various tabs on the Volume Control dialog box to set the volume and balance for each device.

Lab Activity

Ans. Do it yourself.



6 More on MS Word 2010



Exercise

A. Tick (3) the correct option :

Ans. 1. b. 2. d. 3. b.

B. Fill in the blanks :

- Ans.** 1. To add a new line within a cell, press **Enter** key.
 2. **Header** is a text that is printed at the top of each page.
 3. You can **merge** and even **split** cells of a table.
 4. **Table** is made up of horizontal rows and vertical columns.
 5. The Insert table dialog box is accessed from the **Table** menu.

C. State 'True' or 'False':

Ans. 1. True 2. True 3. False 4. True 5. False

D. Define the following :

- Ans.** 1. **Header**—Header is a text that is printed at the top of each page.
 2. **Footer**—Footer is a text that is printed at the bottom of each page.
 3. **Table**—A table is made up of horizontal rows and vertical columns.
 4. **Cell**—The intersection of a row and a column is called a cell.
 5. **Footnotes**—Footnotes can be found at the end of the page.
 6. **Messing calls**—These cells are used to create one united merged cell.

E. Differentiate between the following :

- Ans.** 1. **Header and Footer**—Header is a text that is printed at the top of each page. They may be book's name or chapter's name etc. Where as footer is not at the top of the page, it is at the bottom of the page. They may be page no, or book no, etc.
2. **Footnote and Endnote**—Footnotes and Endnotes can be found at the end of a page or the end of a document, respectively. These are generally used by authors when writing books. They can provide an author's comments on the main text, or give the meaning of or related details about the marked text.
3. **Table and Cell**—A table is made up of horizontal rows and vertical columns. The intersection of a row and a column is called a cell. You can enter any type of information, in the form of text or graphics in a cell.

	Column 1	Column 2	
	Name	Post	Address
Cells	Raman	clerk	12-A Noida
	Suresh	Head of Department	346 Beta II Greater Noida
			Row 1 Row 2 Row 3

4. **Merging and Splitting Cells**–You can merge and even split cells of a table.

To merge cells, follow these steps :

Step 1. Select the cells which you want to merge.

Step 2. Click on Merge Cells in the Merge group on the Table Tools Layout tab.

It will merge all the selected cells.

To split cells, the steps are as follows :

Step 1. Click on the cell(s) which you want to split.

Step 2. Click on Split Cells in the Merge group on the Table Tools Layout tab.

The Split Cells dialog box appears.

Step 3. Specify the number of columns and rows, and click on OK.

F. Replace the incorrect word with correct word in the following sentences :

1. The text which is at the top of the page is called **header**.
2. Footnotes and **endnotes** can be found at the end of a page **and at the** end of a document respectively.
3. Footnotes are given at the end of the **document**.
4. To insert footnotes and endnotes first we click on **Footnotes launcher** footnotes group.
5. A table is made up of horizontal **rows** and vertical **columns**.
6. Table button is limited to eight rows and **ten** columns.
7. Using **Quick Tables** option, you can select a pre-designed table template and insert in your word document.

G. Answer the following questions :

Ans.

1. Tables are used to place information into rows and columns. Alternatively, you can use tables as away to position images. Word tables are the perfect way to display complex usual information in a page.
 2. To insert header and footer in your document, follow these steps :
 - Step 1. Click on the Insert tab.
 - Step 2. In the Header & Footer group, click on the Header button. The Header gallery will open.
 - Step 3. Click on the Blank header style or choose any other style according to your requirement. The Design tab will appear under Header & Footer Tools. This tab will come only when your cursor is in the header or footer area.
 - Step 4. Type the header text in the header area.
 - Step 5. Click on Go to Footer button in the Navigation group. The cursor appears in the footer area. Type the text in the footer area.
- OR
- Click on the Insert tab. In the Header & Footer group, click on Footer to display the Footer gallery. Click on the footer style you want. Type the text in the footer area.

Step 6. Click on Close Header and Footer button in the Close group of Design tab or press the Esc key.

3. **Inserting Footnotes and Endnotes :**

To insert footnotes and endnotes, follow these steps :

Step 1. Place the cursor where you want to insert a footnote or endnote.

Step 2. Click on the References tab. In the Footnotes group, click on Insert Footnote or Insert Endnote button.

This inserts the note reference mark immediately.

Step 3. Type the required text for the footnote/ endnote.

Step 4. Double click on the footnote/endnote reference number to return to the document.

4. There are many advantages of using tables–

- It is an effective way of arranging text.
- You can catalogue information on a specific topic.
- Data arranged in a table looks more meaningful, neat and organized.
- Large amount of information can be presented in a concise manner.

5. a. **Creating a Table using the Draw Table option :**

To create a table using the Draw Table option, follow these steps :

Step 1. Place the cursor where you want to draw a table.

Step 2. Click on the Insert tab.

Step 3. Click on the Table button in the Tables group.

Step 4. Click on the Draw Table option.

Step 5. Click in the document. The mouse pointer changes to a pencil pointer. Start in the upper-left corner where you want to place your table and drag to the lower right corner.

Now, draw rows and columns one by one. The Table Tools tab appears for adding styles to the table.

Step 6. To erase a line or a block of lines, click on the Erase button in the Draw Borders group, and then click on the line you want to erase.

Step 7. To change the mouse pointer from pencil to normal, click on the Draw Table button on the Draw Borders group or press the Esc key.

b. **Creating a Table using the Insert Table option :**

To create a table by using the Insert Table option, follow these steps:

Step 1. Place the cursor where you want to insert a table.

Step 2. Click on the Insert tab.

Step 3. Click on the Table button in the Tables group.

Step 4. Click on the Insert Table option. The Insert Table dialog box appears.

Step 5. Specify the number of rows and columns you want.

Step 6. Click on OK to insert the table.

c. **Creating a table using the Table button :**

This is the quickest way to create a simple table.

To use this feature, follow the steps given below :

Step 1. Place the cursor where you want to insert the table.

Step 2. Click on the Insert tab.

Step 3. Click on the Table button in the Tables group.

A drop down grid appears.

Step 4. Drag the mouse down and across the grid to select the required number of columns and rows.

Step 5. Release the mouse button to create the table at the insertion point.

6. Deleting Cells, Columns or Rows :

To delete cells, columns or rows, follow these steps :

Step 1. Select the cell, column or row that you want to delete.

Step 2. Click on the Delete option in the Rows & Columns group on Table Tools Layout tab. You will get a delete drop down list.

Step 3. Select the appropriate option. If you choose Delete Cells, a dialog box appears. Use this to decide what you want to do with the other cells in the row or column.

Step 4. Click on the appropriate button and then click on OK.

7. Inserting Header and Footer

To insert header and footer in your document, follow these steps :

Step 1 : Click on the Insert tab.

Step 2 : In the Header & Footer group, click on the Header button. The Header gallery will open.

Step 3 : Click on the Blank header style or choose any other style according to your requirement. The Design tab will appear under Header & Footer Tools. This tab will

come only when your cursor is in the header or footer area.

Step 4 : Type the header text in the header area.

Step 5 : Click on Go to Footer button in the Navigation group. The cursor appears in the footer area. Type the text in the footer area.

OR

Click on the Insert tab. In the Header & Footer group, click on Footer to display the Footer gallery. Click on the footer style you want. Type the text in the footer area.

Step 6 : Click on Close Header and Footer button in the Close group of Design tab or press the Esc key.

Lab Activity

Ans. Do it yourself.



7

More on MS PowerPoint 2010



Exercise

A. Tick (3) the correct option :

Ans. 1. d. 2. b.

B. Fill in the blanks :

- Ans.**
1. **Quick Access Toolbar** allows access to common commands.
 2. **Backstage view** is similar to the Office Button Menu of PowerPoint 2007.
 3. PowerPoint files are called **Presentations**.
 4. **Placeholders** are areas on the slide that are enclosed in dotted borders.

C. State 'True' or 'False':

- Ans.** 1. True 2. False 3. True 4. False

D. Find and match the names of the icons to the words in the box :

Ans.

Icons on the left: New Slide, My Templates, From Beginning, Insert Picture from File, Insert Table, Insert Chart, Clip Art, Insert Media Clip.

Text in the box: New Slide, My Templates, Title Slide, Text Box, From Beginning, PowerPoint, Insert Table, Insert Chart, Insert SmartArt Graphic, Insert Picture from File, Clip Art, Insert Media Clip.

Icons on the right: New Slide, Title Slide, Text Box, From Beginning, Insert Chart, Insert Chart.

E. Answer the following questions :

Ans. 1. **Features of MS PowerPoint 2010 :**

The Ribbon

The Ribbon contains multiple tabs, each with several groups of commands. Some tabs, like Drawing Tools or Table Tools appear only when you are working with certain items like images or tables.

Quick Access Toolbar

Quick Access Toolbar is located above the Ribbon. It allows access to common commands. By default, it shows the Save, Undo, and Repeat commands.

2. Slides contain placeholders, which are areas on the slide that are enclosed by dotted borders.
3. The placeholders are arranged in different layouts that can be applied to existing slides, or chosen when you insert a new slide. A slide layout arranges content using different types of placeholders, depending on the kind of information in the presentation.
4. A presentation can be viewed in the following ways after it is ready.

Reading View : This view includes easily accessible buttons for navigation, located at the bottom right.

Slide Show View : This view completely fills the computer screen and is what the audience will see when they view the presentation.

Normal View : This is the default view where you create and edit your slides.

Slide Sorter View : In this view, miniature slides are arranged on the screen. You can drag and drop slides to easily reorder them, and see more slides at one time.

5. Creating a New Presentation :

Step 1. Click the File tab. This takes you to Backstage view.

Step 2. Select New.

Step 3. Select Blank presentation under available Templates and Themes. It will be highlighted by default.

Step 4. Click Create. A new blank presentation appears in the PowerPoint window.

Lab Activity

Ans. Do it yourself.



8 LOGO Procedures



Exercise

A. Tick (3) the correct option :

Ans. 1. d. 2. a. 3. c. 4. a. 5. c. 6. b. 7. a.

B. Fill in the blanks :

- Ans.**
1. A procedure always starts with the **TO** command.
 2. **END** command is given to end a procedure.
 3. A procedure that is embedded inside another procedure is known as **Sub procedure**.
 4. The **SAVE** command saves the procedure in **secondary** memory.
 5. **LOAD** command loads a procedure from a disk to Primary memory.

C. State 'True' or 'False':

Ans. 1. True 2. True 3. True 4. False 5. True

D. Which of the following are not valid procedure names?

Ans. 1. SD301 2. 22SS 4. FORWARD 6. PROC1+2

E. Define the following :

- Ans.**
1. A LOGO Procedure is a set of LOGO commands given one after the other and referred to by a name to perform a particular task. It is actually a program written in LOGO language.
 2. **SAVE** Command is used to save procedure file.
 3. **EDIT** Command is used to make changes in an already written procedure.
 4. **LOAD** Command is used to recall a saved procedure.
 5. You can use a procedure within a procedure. This is called nesting of procedures.

6. SQUARE is embedded or nested inside the procedure DESIGNSQ. SQUARE is called the Subprocedure and DESIGNSQ is called the Main procedure or Master procedure.
7. Recursion means 'going back'. So, as the name implies, a Recursive Procedure is a procedure which goes back and uses itself as a part of the instructions.
8. **FENCE Command**—On giving the FENCE command the procedure will draw vertical bars of increasing heights, the turtle keeps drawing until it goes out of bounds of the screen.

F. Answer the following questions :

Ans.

1. A LOGO procedure is a set of LOGO commands given one after the other and referred to by a name to perform a particular task. It is actually a program written in LOGO language.
A procedure is divided into three parts, namely, Title Line, Body, and End Line.
2.
 - a. The name of a procedure can include letters, numbers or symbols.
 - b. The first character should always be a letter.
 - c. Blank spaces cannot be included.
 - d. Arithmetic operators like +, -, /, * cannot be included.
 - e. LOGO command names cannot be included.
 - f. Some valid Procedure names are, Circle, B2B, AMIT2 and P\$5, while the names P 25, 123, X+Y, HT are invalid Procedure names.
3. To execute the procedure CIRCLE, simply type the name of the procedure in the Input box and press the Enter key.

CIRCLE ↵

The instructions contained in the procedure get executed and the turtle draws a picture on the screen.

4. Nested Procedures :

You can use a procedure within a procedure. This is called nesting of procedures. Let us understand it with the help of an example.

5. Yes, we can use more than one variables in a procedure.

Type the following commands in the Input box.

```
TO RECTANGLE : LENGTH : WIDTH
REPEAT 2 [FD : LENGTH RT 90 FD : WIDTH RT 90]
END
```

You can see from the above example that we can use two or more variables while naming a procedure. A colon sign (:) separates the name of each variable.

To get the output you need to type the procedure name followed by two numbers, one for LENGTH and one for WIDTH. For example,

```
RECTANGLE 100 60
```

This will draw a rectangle with length 100 units and width 60 units.

6. SQUARE is embedded or nested inside the procedure DESIGNSQ. SQUARE is called the Subprocedure and DESIGNSQ is called the Main procedure or Master procedure.

Main procedure or Master procedure is a procedure which contains one

or more other procedures and a Subprocedure is a procedure which is embedded with another procedure.

Let us take another example :

```
Subprocedure :           ARC
                        TO ARC
                        REPEAT 18 [FD 5 RT 10]
                        FD 5
                        END
Main procedure :        DESIGN
                        TO DESIGN
                        CS
                        PU
                        LT 90 FD 120 RT 90
                        PD
                        REPEAT 5 [ARC LT 180]
                        END
```

On typing DESIGN in the Input box, the Main procedure DESIGN gets executed and draws the picture by repeatedly using the subprocedure ARC.

7. A procedure is always started with the word TO followed by the name of the procedure. When LOGO comes across the command TO, it interprets it to be the start of a procedure and the text followed to be the name of the procedure.

When you press the Enter key after typing the procedure name in the Command-Input box, an Input box titled To Mode pops up, indicating that the computer is ready to accept the primitives to be stored in the procedure.

Now, you can enter the primitives required to achieve the desired task. Keep pressing the Enter key after each command. When you have typed all the instructions you want to be stored in the procedure, type the End command to mark the end of the procedure and press the Enter key. A message will appear procedure defined.

8. **Making Changes in a Procedure :**

To make changes in an already written procedure, Edit command is used.

The Syntax of the EDIT command is :

```
EDIT "Procedure name"
```

It opens the LOGO Editor where you can make changes in the set of LOGO commands written in the procedure.

After making the desired changes, select the Save and Exit option from the File menu.

9. **Recursive Procedures :**

Recursion means 'going back'. So, as the name implies, a Recursive Procedure is a procedure which goes back and uses itself as a part of the instructions. Let us take an example.

```
TO STAIR : STEP
```


FD : STEP
RT 90
FD : STEP
LT 90
STAIR : STEP
END

10. Recursion can be stopped by use of IF statement in a procedure. The syntax of IF statement is

IF : <variable> <condition> [STOP]

Example :

IF : UNIT = 100 [STOP]

IF : UNIT > 150 [STOP]

IF : UNIT < 90 [STOP]

Lab Activity

Ans. Do it yourself.



9

MS Excel 2010—Formulae and Functions



Exercise

A. Tick (3) the correct option :

Ans. 1. c. 2. d. 3. a. 4. b. 5. a.

B. Fill in the blanks :

- Ans.**
1. Formulas are used to perform **calculations**.
 2. Formula must be started with **an = (equal to)** sign.
 3. **Today** function shows the current date.
 4. **Sorting** refers to arranging data systematically.
 5. Cell referencing is mainly of **two** types.

C. State 'True' or 'False':

Ans. 1. True 2. False 3. False 4. False 5. True 6. False

D. Replace the incorrect word with the correct word in the following sentences:

1. Excel follows **BEDMAS** rule for doing calculations based on arithmetic formulas.
2. Priority value of **bracket operator** is **one**.
3. A formula or a function in excel always starts with **an equal** sign.
4. In excel, **sorting** refers to arranging data systematically in an order.

E. Short answer type questions :

- Ans.**
1. Sum : Sum () function is used to find sum of all digits.
 2. Round : To round off the selected number of the specified number of digits.
 3. Count : To count the number of cells containing numeric data (leaving the blank cells), out of a selected range.
 4. Today : To display the current system date.

F. Long answer type questions :

Ans. 1. In Excel, Sorting refers to arranging data systematically in an order. For example, you may want to arrange the names of students in an order in a worksheet can be in the alphabetical order or in the total marks scored by students of the class.

You may also arrange the data in ascending or descending order.

To quickly sort your data, the steps are as follows :

Step 1 : Select the range of cells whose data needs to be sorted, such as A1:A30. The range can include the column titles also.

Step 2 : Click on the Data tab.

Step 3 : From the Sort & Filter group, click on option to arrange data in ascending order, that is, from the smallest to the largest or from A to Z. OR click on option to arrange data in descending order, that is, from the largest to the smallest or from Z to A.

2. When you copy a formula to a cell or a range of cells, the row/column reference gets automatically adjusted depending upon the row/column you are copying the formula to. This feature of Excel is called Cell Referencing.

Cell referencing is mainly of two types :

a. Relative Cell Referencing

b. Absolute Cell Referencing

3. Excel can be used to perform basic mathematical operations such as addition, subtraction, multiplication or division for the values in a range of cells with the help of formulae. You can even find out the average value of the selected cells, and do a lot more.

Have you ever heard of the BODMAS (Bracket, Of, Division, Multiplication, Addition and Subtraction) rule in mathematics? It defines the order in which mathematical operators should be used. In Excel, there is an E(exponent) instead of O (Of). So, Excel follows the BEDMAS rule for doing calculation based on arithmetic formulae.

4. Function	Purpose	Example
AVERAGE	To calculate the average of a selected range of numbers	AVERAGE(B2:B50)
MAX	To display the maximum value out of a given range of numbers	MAX(A1:A200)
MIN	To display the minimum value out of a given range of numbers	MIN(A1:K1)
COUNT	To count the number of cells containing numeric data (leaving the blank cells), out of a selected range	COUNT(B1:K20)
COUNTA	To count the number of cells that are not empty (leaving the blank cells), out of a selected range of cells	COUNTA(B1:K20)

5. Some common errors in formulae :

Error	Possible Reason	Solution
#####	The column is not wide enough to accommodate the number. The number of # symbols may vary.	Increase the column width or reduce the font size.
#VALUE	The formula contains invalid data. For example, you are trying to add a value with a label.	Correct the formula or change the cell reference.
#DIV/0!	The formula is trying to divide a number by 0 or a blank cell (division by zero).	Correct the formula or change the cell reference.
#N/A	Data referred in the formula is not available.	Correct the formula or change the cell reference to make the required data available.
#REF!	The formula refers to a cell that isn't valid. This can happen if the cell has been deleted from the worksheet.	Correct the formula or change the cell reference to make the required data available.

Lab Activity



10 Internet



Exercise

A. Fill in the blanks :

- Ans.**
- Inbox** folder of the e-mail account keeps a record of all the received mails.
 - Garh** folder keeps the record of all the deleted mails.
 - Chat** is a feature of Internet that helps us to communicate by typing on the computer sitting far away from each other.
 - To send a new mail, we have to click on **compose**.
 - Add CC** and **Add BCC** allow us to send e-mail to more than one person.
 - Forward** option forwards the message to another person.

B. State 'True' or 'False':

- Ans.** 1. True 2. True 3. False 4. True 5. False 6. False

C. Name the following :

- Ans.**
- Search Engines
 - WWW.Yahomall.com
 - The DM 525
 - Compose
 - Resend
 - Composed mail

Composed mail

D. Answer the following questions :

- Ans.**
1. You need the following to use the Internet facility :
 - a. A multimedia computer.
 - b. A modem and a telephone line connected to it.
 - c. An account or registration with an ISP (Internet Service Provider) like VSNL and Airtel. The ISP will register your name and give you a user name, a password, and the phone number for you to dial for connection.
 - d. You also need a dial-up network connection, software of the particular ISP that helps you to connect. For example, VSNL's software is VSNL auto dialer.
 - e. A browser or Internet software is also needed that helps you to surf the net, like Microsoft Internet Explorer and Netscape Navigator.
 2. It is not necessary that you know the URL or the related websites of the information you are seeking. In this situation, Search engines are used to get information from the Internet. MSN, Google, and Yahoo are some of the most commonly used search engines.
 3. E-mail is the short form of electronic mail. It is the most widely used application on the Net.

E-mails are like letters sent from and to a computer through the Internet. These electronic letters can be sent and received only when the sender and receiver have an access to the Internet.

To send or receive e-mails, an e-mail account is needed. There are many websites like Gmail, Yahoo mail, and Hotmail that allow people to open their e-mail accounts free of charge.
 4. To send or receive e-mails, an e-mail account is needed. There are many websites like Gmail, Yahoo mail, and Hotmail that allow people to open their e-mail accounts free of charge.
 5. We can also send Word files, Excel sheets, or pictures by attaching them in the e-mail.

Fun To Do



11 Computer Viruses



Exercise

A. Tick (3) the correct option :

- Ans.** 1. b. 2. d. 3. d. 4. c. 5. d.

B. Fill in the blanks :

- Ans.**
1. **The computer viruses** are small software programs that are made in such a way that they spread from one computer to another and interfere with the computer operation.
 2. VIRUS stands for **Vital Information Resource Under Siege**.

3. Computer viruses are in fact similar to the **biological** viruses which infect the living things.
4. **Multi pirate** is hybrid of both boot and program viruses.
5. **Antivirus** software is used to prevent, detect and remove malware, including computer viruses, worms and Trojan horses.

C. Name the following :

- Ans.** 1. Stealth Virus 2. Boot Virus 3. Program Virus
4. E-mail Virus 5. Metamorphic Virus

D. Answer the following questions :

- Ans.** 1. Antivirus software is used to prevent, detect and remove malware, including computer viruses, worms and Trojan horses. Some commercial anti-virus scanners use heuristic signatures to look for specific attributes and characters for detecting viruses.
Two software are Kaspersky, AVG.
2. The word “Heuristic” is Greek for “To find”. When the word is applied in the world of computer science, it generally refers to a software that’s able to resolve a problem with alternative methods with the goal of reducing overall processing time. Various software companies use heuristics to scan files and programs for suspicious code likely to be found in a virus and not in a legitimate program.
3. Computer viruses are in fact similar to the biological viruses which infect the living things. They are :
- Self-spreading and reproductive i.e., they spread from one computer to the other computers.
 - They damage the host computer.
 - They can be prevented by using anti-virus software.
- However, Virus is nothing but a computer program written to affect the working of the computer. In some cases, they are extremely destructive.
4. It provides protection for :
- File Anti-virus
 - Web Anti-virus
 - Firewall
 - Anti spam
 - Mail Anti-virus
 - Proactive Defense
 - Privacy Control
 - Parental Control
- It scans for viruses and after finding a corrupted file asks for action. So, it is very useful to us.
5. Computer viruses are small software programs that are made in such a way that they spread from one computer to another and interfere with the computer operations. Virus stands for “Vital Information Resource Under Siege”. A Computer Virus can affect another program, can erase, corrupt or delete data and use the e-mail network to spread itself to other computers.

Lab Activity

- Ans.** Do it yourself.