

# 2

## KEYBOARDING

### 2.1 LET'S START

In today's world computer is necessity of life. Computer works on the principle I/O Cycle i.e. Input → Process → output cycle and input plays an important role in computer operations. There are many input devices available in the market but **keyboard** is the one device without which no one actually works on the computer. So in this lesson you will learn about the types of keyboards and brief knowledge of word processor.

In the previous lesson you have learnt about the meaning and importance of e-Typewriting. You have also learnt about the basic operations of computer like starting and shutting the computer.

### 2.2 OBJECTIVES

At the end of this lesson, you will able to:

- differentiate between various types of keyboards
- differentiate between Sight and Touch method of typewriting
- start Word processing package
- create, save and open an existing document in a Word Processor

### 2.3 LEARNING COMPETENCIES

At the end of this lesson, you will be able to attain the following competencies:

- Operation of the various types of keyboards
  - Ability to typewrite with Touch Method
  - Ability to create, save and open an existing document in a Word Processor
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## **2.4 KEYBOARD – Meaning and Importance**

Keyboards are input devices. An input device is any peripheral or computer hardware that's used to control signals to your computer. Keyboards, scanners and even gaming controllers are all considered input devices or peripherals.

This is the most common input device which has an arrangement of buttons or keys. It is like a typewriter. Internally, a keyboard contains a matrix of switches and a keyboard controller. When you press a key, its switch gets pressed and when you release a key, its switch gets released. Through pressing & releasing of switches, keyboard controller generates a scan code.

Keyboards come in all shapes and sizes. Gone are the days of simply using the keyboard that comes standard with your desktop computer. Keyboards today offer a selection of features for home or office use—such as integrated dual speakers that provide stereo-quality sound, media consoles that let you play and navigate through your music and specially internet browser controls for an improved internet surfing experience.

### **Advantages of Keyboard**

- Most reliable way of inputting data.
- Reliable way of inputting text and numbers.
- Available in variety of format.

### **Disadvantages**

- Not useful for entering some specific type of data e.g. picture, diagrams, voice, video etc.
- Very slow while accessing menu options or selecting various objects on screen.
- Not much useful for enlarging or changing sizes of windows on screen.

## **2.5 CATEGORIES OF KEYBOARDS**

Keyboards are divided into three main categories based on input method. These categories are:

- Wired keyboards
  - Wireless keyboards
  - Virtual Keyboards
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### 2.5.1 Wired Keyboards

A wired keyboard means there is a wire connecting your keyboard to your computer. At the end of the wire is a USB (Universal Serial Bus) or PS/2 (Personal System/2) plug that goes into a port on your computer. Wired keyboards are extremely reliable—there is little that could go wrong with this direct connection.

The one drawback of having a wired keyboard is that your distance is limited between the keyboard and your computer; you can only have your keyboard as far from your desktop or laptop as the wire length. Also, wires can clutter your desktop. If you are looking for something sleek, you might consider a wireless keyboard.



Fig. 2.1 : Wired Keyboard

### 2.5.2 Wireless Keyboards

A wireless keyboard works just like a wireless mouse; you plug a receiver into one of the USB ports on your computer. The receiver then sends a signal to your battery-powered keyboard. Keep in mind, wireless USB keyboards do have a limited range and some must be within the line of sight of your receiver, depending on the type of signal it uses. Also, if your cordless keyboard starts acting sluggish, it probably requires new batteries.

Wireless keyboards present a specific benefit to the consumer. First, wireless USB keyboards reduce wire-clutter on your desk. Also, you aren't tied to your desk—you can type from your couch, your kitchen table or even while seated on your living room floor! Some keyboards come in a set with a wireless keyboard and mouse. This is an added bonus since computer use is no longer limited to your office.

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Fig. 2.2 : Wireless Keyboard

### 2.5.3 Virtual Keyboard

When entering confidential data (such as a user name and password at an online store) with a normal keyboard, there is always a risk of this data being intercepted by spyware. Such programs record keystrokes and in this way read information that is entered with a normal keyboard. This information is then sent to the intruder through the Internet.

Functions of different keys on the Virtual Keyboard

**Caps Lock:** This key can be used to enter upper case if the password consists of capital letters.

**Back Space:** This key will clear the last character entered in the password field.

**Clear:** This key will clear all characters entered in the password field by virtual keyboard.

**Tab:** This key is visible only for change or forced change of password. This key can be used to enter values in the next field.

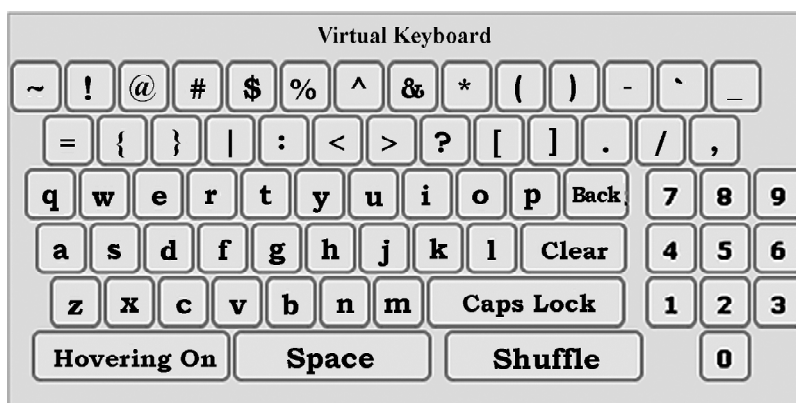


Fig. 2.3 : Virtual Keyboard

### **Advantage of a Virtual Keyboard**

The Virtual Keyboard is designed to protect your password from malicious “Spyware” and “Trojan Programs”. Use of Virtual keyboard will reduce the risk of password theft.

### **Disadvantages of a Virtual Keyboard**

➤ **Tactile Feel**

One benefit of a physical keyboard is the ability to feel the keys pushing down. Although this is not necessary, it does help some users determine when a key is struck with an appropriate amount of force. The virtual keyboard does not provide the same tactile feel and can take some adjustment for those composing letters, documents or chatting online.

➤ **Space**

On a device with enough screen space to accommodate a full size keyboard, it can be difficult to see the document being typed on the screen. A full-size QWERTY keyboard uses a large amount of the screen space to accommodate two hands while typing. This limits the ability to proofread a document or letter while typing. Only a fraction of the letter or document will be visible above the virtual keyboard.

➤ **Dirty Screens**

While a physical keyboard can become dirty with crumbs, dust and debris, the screen usually remains clean. When using a virtual keyboard and touch-screen technology, the screen will inevitably become smudged and dirty. Over time, the device’s screen can become difficult to see and read.

➤ **Ergonomics**

Using a virtual keyboard on a larger tablet style device can cause ergonomic issues for the user. The device must be propped at an angle to keep wrists in the proper position for comfortable typing. The user must also look directly down on the screen while typing and this can lead to neck injury or neck fatigue if typing for a long period.

## **2.6 KEYBOARD LAYOUTS**

➤ **QWERTY**

The QWERTY (pronounced KWEHR-tee) keyboard is the standard typewriter and computer keyboard in countries that use a Latin-based

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alphabet. QWERTY refers to the first six letters on the upper row of the keyboard. The key arrangement was devised by Christopher Latham Sholes whose “Type-Writer,” as it was then called, was first mass-produced in 1874. Since that time, it has become what may be the most ubiquitous machine-user interface of all time.

The QWERTY arrangement was intended to reduce the jamming of typebars as they moved to strike ink on paper. Separating certain letters from each other on the keyboard reduced the amount of jamming. In 1932, August Dvorak developed what was intended to be a faster keyboard, putting the vowels and the five most common consonants in the middle row, with the idea that an alternating rhythm would be established between left and right hands. Although the Dvorak keyboard has many adherents, it has never overcome the culture of learning to type on a QWERTY.



Fig. 2.4 : Qwerty Keyboard

### ➤ IN-SCRIPT (Indian Scripts)

Script is basically a way or mechanism of inscribing. One script may be used for writing different languages and one language may be written using different scripts. For e.g. Devnagari script is used for writing languages like Hindi, Marathi, Konkani, Santali, Dogri, Sindhi, Kashmiri. At the same time, languages like Konkani are written using Roman script and Devnagari script, santali language can be written using Devnagari script as well as ol-chiki script.

## Devanagari (Hindi) Keymap (Normal mode)



## Devanagari (Hindi) Keymap (Shift mode)



Fig. 2.5 : Inscript Keyboard

**Explore**

Keyboard can also be categorized according to the interface :

- AT keyboard Interface,
- PS/2 Keyboards and
- USB keyboards.

**INTEXT QUESTIONS 2.1**

- i. An \_\_\_\_\_ device is any peripheral or computer hardware that's used to control signals to your computer.
- ii. \_\_\_\_\_ script is used for writing languages in Hindi.
- iii. A keyboard contains a \_\_\_\_\_ of switches and a keyboard \_\_\_\_\_.
- iv. There is always a risk of this data being intercepted by \_\_\_\_\_.
- v. The full form of USB is \_\_\_\_\_.
- vi. August Dvorak developed the QWERTY keyboard in the year \_\_\_\_\_.

## 2.7 METHODS OF TYPEWRITING

### 2.7.1 Sight Method of Typewriting

The sight method was the only prevalent method right from the very beginning when the first typewriter was invented in 1714 till 1878, when another method of typewriting called as ‘Touch Method of Typewriting’ was introduced by an American Typist Mr. Charles McGurin.

In the Sight Method the Typewriting is done by looking at the Keyboard and the material which is to be typed by the Operator. The Operator reads a few words from the matter to be typed, types the same by looking at the Keyboard and then again reads some words and types them again and goes on repeating this process till the whole page is typed. In this method all the fingers are not used. Only the ‘forefingers’ of both the hands are used for typing in the sight method of typewriting. This method is not scientific. In this method the Operator cannot concentrate on the copy. Though this system is easy to learn in the beginning, but it is not good for acquiring high speed in typewriting.

#### *Advantages of Sight Method of Typewriting*

- It is very easy because it can be learnt without the help of a teacher.
- There is no need to learn and master the Keyboard.
- It is beneficial for those who have to use the computer for their personal use because they are not required to learn the operation of the Keyboard.

#### *Disadvantages of Sight Method of Typewriting*

- Since typewriting is done only with two fingers of both the hands, more time and energy is spent for typing little amount of work.
  - The Computer Operator gets tired by using this method because of the frequent movement of eyesight both on the Keyboard and the matter to be typed.
  - High speed cannot be attained.
  - There are chances of omission of words/lines, because the Computer Operator has to look both on the copy from where the matter has to be typed and the Keyboard for locating the alphabets and in doing so, omissions are possible.
  - All the fingers of both the hands are not used in this method.
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### **2.7.2 Touch Method of Typewriting**

Touch means the operation of the Computer without looking at the Keyboard. The Computer Operator has to keep his eyesight only on the note book from which the matter has to be typed. The operation of the Keys is by sense of location and not by sight. This method is based on scientific lines. Each finger has to operate on the keys allotted to it. All the fingers of both the hands are used in this method. Unnecessary movement of eyesight and hands is avoided.

This is the most scientific and modern method of typewriting. In this method, generally, the keyboard is first divided into two parts, one for the left hand, and the other for the right hand, each part being sub-divided into sections for each finger. The 'Forefingers' of both the hands are allotted eight keys each because these fingers are stronger than the other fingers.

Touch method of typewriting is superior to the sight method. Though in the beginning the Computer Operator has to put in hard work, but it is very beneficial for acquiring high speed in the long run.

#### *Advantages of Touch Method of Typewriting*

- There is saving of time and energy. Since the work is distributed amongst all the fingers of both the hands and unnecessary movement of hands and eyesight is avoided, the matter can be typed quickly. This can be specified as division of labour among all the fingers.
  - High and accurate speed can be attained.
  - The Computer Operator does not tire even after many hours of work because the work is divided among all the fingers of both the hands.
  - Since the eyesight remains on the matter to be typed, there are less chances of omission of words or lines. Unnecessary movement of eyesight is also avoided.
  - The Operator is not required to look at the Keyboard.
  - The Operator can concentrate very well on the matter to be typed.
  - Rhythm is maintained in this method of typewriting.
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## INTEXT QUESTIONS 2.2

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### Fill in the blanks:

- i) When \_\_\_\_\_ method of typewriting is adopted, more energy is spent.
  - ii) By touch method, typing is done \_\_\_\_\_ looking at the keyboard.
  - iii) In touch method, operation of keys is by sense of \_\_\_\_\_ and not by sight.
  - iv) In \_\_\_\_\_ method, all fingers of the computer operator are not brought into use.
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## 2.8 WORD PROCESSOR


A word processor is a software package that helps you to create and edit documents. Creating a document involves typing it into the memory of the computer and saving it. Editing a document means correcting the spelling and grammatical mistakes, if any, and deleting or moving words, sentences or paragraphs.

So in this section you will learn how to create, open and save the document because it is necessary that before going further you must know these things.

### 2.8.1 Creating a New Document

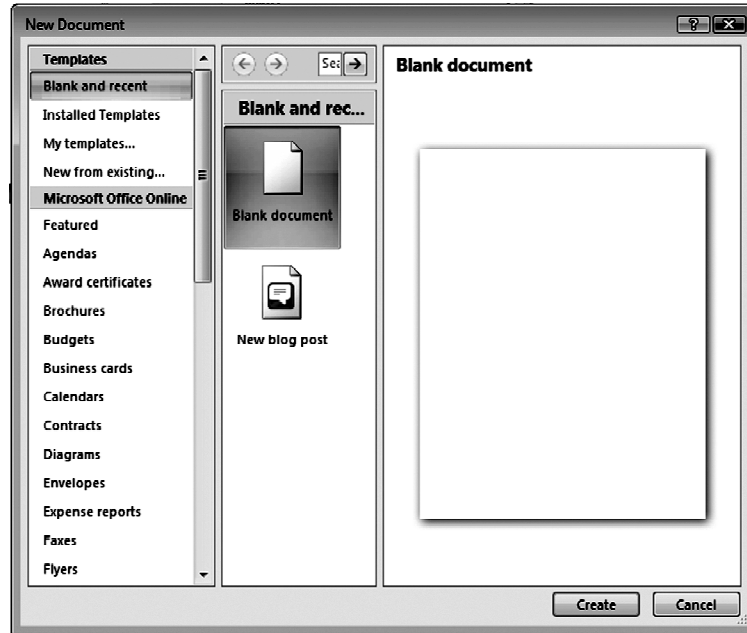
The steps to create a new document are:



1. Select the New Option from the Office Button i.e. . (Office button contains so many options as we can see in the figure given below like New, Open, Save, Save as, Print etc.)



A new dialog box is displayed as shown in the following figure:



2. Select the Blank Document icon.
3. Click on the create button. (Select New Blog Post to create the direct blog page)

A blank new document is displayed.

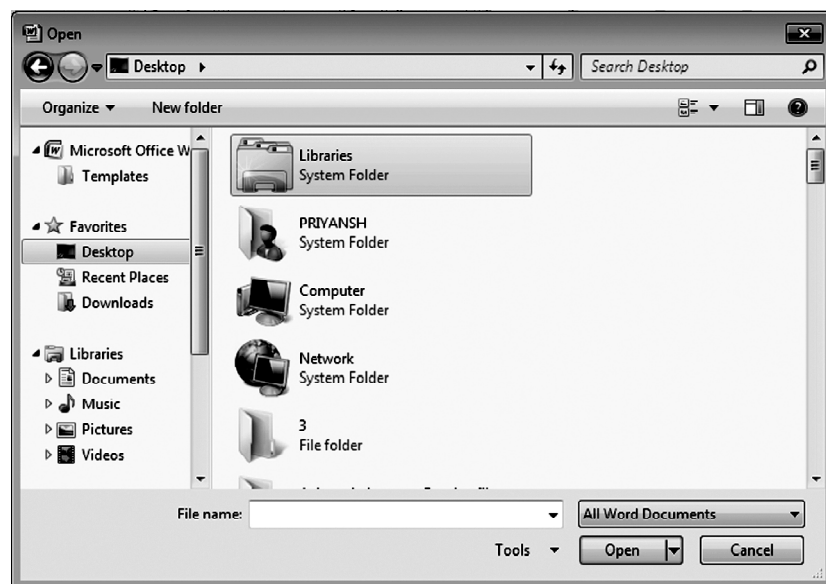
### 2.8.2 Opening an Existing Document

The steps to open existing documents are:

1. Select the Open option from the Office Button i.e.



An Open dialog box is displayed as shown in the following figure:



2. Select the appropriate drive and folder.
3. Type the name of the file to be opened in the file menu name text box or select the file from the list.
4. Click on the open button.

### 2.8.3 Saving a Document

When a document is typed, it is stored in the computer memory for permanent storage. In order to preserve for future use, it needs to be saved on the disk.

The steps to save a document are:

1. Select the 'Save as' option from the Office Button i.e.



The 'Save as' Dialog Box is displayed:



2. Type a file name in the File name box.
3. Click on the Save Button.

By default, the new document is saved as a Word Document with an Extension .docx (for office 2007).

**Note:** It is a good habit that when you start creating any document, save it, immediately after two three lines and press CTRL+S (shortcut key, for further saving in the same document).

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### INTEXT QUESTIONS 2.3


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**1. State 'True' or 'False' for the following statements:**

- a. Blank document dialog box contain two types document options.
- b. CTRL + V is the shortcut key to save the document.
- c. Default extension of word file is .docx.

**2. Fill in the blanks:**

a. You are learning \_\_\_\_\_ version of MS-Office.

b.  is known as \_\_\_\_\_ Button.

c. You can open two types of document i.e. \_\_\_\_\_ and \_\_\_\_\_.

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### 2.9 LET'S SUM UP

In this lesson you have learnt about various types of keyboards such as wired, wireless, virtual with their respective advantages and disadvantages. You have also studied about keyboard layouts- qwerty & Inscript and methods of typewriting i.e. sight and touch method. You have also learnt that before you begin typewriting on computers, you must be familiar with creating, opening & saving a word document using word processor.

***Employability Skills: Practicals Work Task***

1. Try to use touch method for typing using any typing software.
2. Open a new document and type few paragraphs.
3. Save the document in "my document" or "d:\\" drive.

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### 2.10 TERMINAL QUESTIONS

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1. Define Keyboard.
  2. Write the advantages and disadvantages of Virtual Keyboard.
  3. Write a short note on QWERTY and In-script keyboards.
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4. Write short notes on Wired and Wireless keyboards.
5. Write the disadvantages of Virtual Keyboard.
6. What do you mean by sight and touch methods of typewriting?
7. Differentiate between sight and touch methods of typewriting.
8. Write the steps to open an existing document.

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## **2.11 ANSWERS TO INTEXT QUESTIONS**

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### **2.1**

- i. Input
- ii. Devangri
- iii. Matrix and controller
- iv. Spyware
- v. Universal Serial Bus
- vi. 1932

### **2.2**

- i. Sight
- ii. Without
- iii. Location
- iv. Sight

### **2.3**

1.
    - a. True
    - b. False
    - c. True
  2.
    - a. 2007
    - b. Office
    - c. Blank Document and new blog post
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## **2.12 GROUP ACTIVITY AND PROJECT WORK**

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1. Make a group of 4-5 students and gather the information about the Kiosk System in India.
2. Make a project report on Interface based keyboard. Write the development and other things.
3. Make the detailed report on Dvorak keyboards.

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## **2.13 REFERENCES AND WEBSITES**

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- Principles of Typewriting by D.P. Bhatia & S S Sangal by Pitman S S Publications.
- How to Learn Typewriting by Dr R C Bhatia, G Lal & Co.
- Learning to Touch-Type by Shlomo Perets, MicroType
- Touch Typing Made Simple by Lillian S. Mark
- List of Free Touch Typing Software and Online Resources as mentioned below:-

### **Title**

10 Finger BreakOut  
Analytical Eye Typing Tutor  
a Type Trainer4Mac  
Bruce's Unusual Typing Wizard  
Gabe's TypOmeter  
kbTrainer  
KeybLaze Typing Tutor  
Kiran's Typing Tutor  
Klavaro Toiuch Typing Tutor  
KTouch  
Max Type LITE Typing Tutor  
Rapid Typing Tutor  
Speed Typing  
Stamina Typing Tutor

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