Unit – 2
Data Entry and Keyboarding Skills

Introduction:

Keyboard:
Keyboard is the most widely used input device. Normal keyboard has more than 100 keys including numbers, alphabets, symbols.
Combination of key press provoke some action.
To achieve speed and operational efficiency proper keying knowledge is important.

Keyboarding Skills:
The touch method of typewriting is a method of typing without using the sense of sight to find the keys. There is no need to search the key while typing and one has to move only the finger which is needed to strike a key.
A touch typist knows the location on the keyboard through muscle memory. Touch typing typically involves placing the eight fingers in a horizontal row along the middle of the keyboard (the home row).
Touch typing can be done with two hands or by using a single hand also. Typing speed generally improves with practice.
The typing speed can be increased gradually and speeds of 60 WPM (words per minute) or higher can be achieved.

Free Typing software:
- Rapid Typing Tutor
- KeyBlaze Free Typing Tutor
- Klavaro Touch Typing Tutor
- Typing Trainer
- MaxType Pro Typing Tutor
**Types of keys**

**Alphanumeric keys:** (A-Z) and numbers (0-9)

**Punctuation keys:** comma (,), period (.), semicolon (;), brackets ([ ]), and parenthesis ( { } ) and so on. Also, the mathematical operators such as the plus sign (+), minus sign (-), and equal sign (=).

- **Alt key:** Short for Alternate, this key is like a second control key.

- **Arrow keys:** up (↑), down (↓), right (→), or left (←).

- **Shift or Alt keys:** used along with arrow keys To move the cursor in more than one position at a time.

- **Backspace key:** Deletes the character just to the left of the cursor

- **Caps Lock key:** It is a toggle key, which when activated, causes all alphabetic characters to be uppercase.

- **Ctrl key:** The control key is used in conjunction with other keys to produce control characters. The meaning of each control character depends on which program is running.

- **Delete key:** The Del key deletes the character at the current cursor position, or the selected object, but does not move the cursor

- **Enter key or Return key:** It is used to enter commands or to move the cursor to the beginning of the next line.

- **Esc key:** The Escape key is used to send special codes to devices and to exit (or escape) from programs and tasks.

- **Function keys:** Special keys labelled F1 to F12. These keys have different meaning depending on which program is running.

**What happens when a key is pressed?**

When a key is pressed, an electrical contact is formed. These electric signals are transmitted to a micro-controller in a coded form to the computer describing the character which corresponds to that key.
**Numeric keypad**

Numeric keypad is used when enormous numeric data has to be entered. It is located on the righthand side of computer keyboard.

- It contains number keys 0 to 9, and signs addition (+), subtraction (−), multiplication (×) and division (/) symbols, a decimal point (.) and
- Num Lock and Enter keys.

Numeric keypad may also work on dual mode. On one mode, it represents numbers and on the other mode, it contains various keys like arrow keys, page up, page down, etc. NumLock is provided to switch between the two modes. Usually, some of the keyboards of laptops do not have a numeric keypad.

**Home keys**

The keys present in the Home Row, ASDF and ; (semi-colon) LKJ are the home keys.

**Guide keys**

On a computer keyboard, keys ‘F’ and ‘J’ are called guide keys for left and right hand, respectively.

Both contain a small raised tangible mark with the help of which the touch typist can place the fingers correctly on the home keys.

**Typing and deleting text**

- For typing click on the letters on the keyboard.
- For deleting text in a document should use the backspace key or the delete key. The backspace key will remove text from behind (to the left of) cursor position.

For typing numbers in a document, numeric keypad or the number row (below function keys) can be used.

**Typing capital letters**

switch ON the Caps Lock
**Typing symbols**

Press and hold the shift key and then press the key with the required symbol. There are two Shift keys on the keyboard — to the bottom left and right of the letters. The Shift key is used to access the top symbols that are one of the keys with two characters.

**Typing sentences**

To get space between typed words, press the space bar once and then type the next word.

**Creating new lines and spaces between paragraphs**

The Enter or return key is used to create new lines and spaces between paragraphs.
Pointing devices

Instead of typing, directly some items can be selected from computer screen, for example "print" or "close" button. This can be done using point and draw devices, such as mouse.

Not only to select, but drawing of line, curve and shapes is also possible with such devices.

Examples of point and draw devices:

- joystick
- light pen
- touch pad
- track ball
- touch screen.

Mouse

Widely used pointing device used to point a particular place on the screen and select to perform one or more actions.

It can be used to select menu commands, resize windows, selecting actions from screen icons, etc.

Parts of common mouse

- Buttons (left & right)
- Handling area,
- Rolling object.

By default, the mouse is configured to work for the right hand. The left-handed persons can change the settings as per the needs.
**Working with mouse**

- Put the right hand on the mouse,
- The index finger goes on the left button,
- The middle finger goes on the right button
- Hold the mouse with thumb and ring finger.
- To click, press a mouse button lightly and release it immediately.

**Mouse pointer**

The mouse pointer allows to point on the screen.

- It will appear as we move around the screen.
- This mouse pointer will also appear as move it around the screen, particularly if it is over text.
- While working on a web browser, the pointer change to a pointing finger symbol as moved it over the page. This identifies a hyperlink.

**Mouse operations**

All mouse do not use the same mechanical operation but all of them accomplish the same task. Some of them use a tracking ball at the bottom and some of them use a type of light beam to detect the motion of mouse.

Laptops are equipped with a small flat surface or sometimes with a very short stick for performing same job as mouse.

The most conventional kind of mouse has two or three buttons on its top. These buttons are used for different actions.

Using left button of mouse different operations like selection, dragging, moving and pasting can be done.

With the right button we can open a context menu for an item
Common mouse actions

(a) **Click or left click:** It is used to select an item. Press down once on the left button with your index finger.

(b) **Double click:** It is used to start a program or open a file or trigger an action.

(c) **Right click:** It is used to display a set of commands and available options. Move the mouse pointer to the desired position, position your middle finger on the right mouse button, keeping the mouse still, click lightly with the middle finger on the right button.

(d) **Drag and drop:** It allows to select and move an item from one location to another. Position the mouse on an object, hold down the left side of the mouse, and drag the object.

(e) **Scroll:** Many applications provide scrollbars on right side of screen if the page length is more than the monitor/screen length. Instead of using page down key or arrow keys, one can use scroll key of a mouse to scroll up or down. If the scroll key is not available, one can click on the scroll bar on the application screen with the left button of the mouse. Use the scroll wheel on the mouse to move the page on the screen up or down.

(f) **Blocking:** Blocking is another way of selecting text. It is used to select text that needs to be edited or formatted. Click at the beginning of the word or sentence and hold down the left button, then drag along the text and see it being highlighted in black. At the end of the text or sentence release the left button.
Typing ergonomics

Following Typing ergonomics is very important for efficient and effective typewriting.

They are also important to attain and maintain accuracy and speed. Some of these factors included are as given as below.

**Sitting posture**

While operating the computer keyboard, sit straight, slightly bending your neck forward. Check your comfort and sitting position of body. Touch the lower portion of your back to the lower portion of the back rest of the chair. Touch both the feet to the floor.

**Position of hands**

Put your forearms at level with the keyboard and palms down
Keep your wrists straight and hang your elbows naturally.
Don’t touch the elbows to the body nor be too far away from the body
Bend at about a 90 degree angle.

**Monitor placement**

✓ Do not bend your neck while working on the monitor
✓ keep the upper border of screen at eye level.
✓ The distance of screen from the user depends on the size of the screen.
✓ Keep an approximate distance of about 60–65 cms for 17 inches screen.

**Mouse and keyboard placement**

✓ Keep the keyboard and mouse together at an approximate distance of 20 cms,
✓ Same height of keyboard, mouse and elbows helps the users to work comfortably.

**Chair and table placement**

✓ Adjust computer chair and table to an optimal height.
✓ The chair of the computer user must be supportive to his/her lower back
✓ Keyboard and vibrating devices, such as printers, should be on separate tables.

✓ The computer table should also have sufficient space for your legs.

**Placement of matter to be typed**

✓ Place the matter for typing to the left or right side of the keyboard preferably on a Copy Holder which has a sloping surface.
Positioning of fingers on the keyboard

- **Mastery typewriting skills** means to attain necessary knowledge and skill of keyboard operation by correct positioning of fingers.
- In the **Home Row Approach**, also called **Horizontal Approach**, all the eight fingers of both the hands rest on Home Keys during the keyboard operation.
- The fingers are trained to make the correct movement to the other keys in such a way that each finger returns immediately to its home key after it has depressed the corresponding key in any other row.
- The thumb of the right hand is used to operate the Space Bar.

Allocation of keys to fingers

The keyboard learning process starts from the

- **✓** Second row (Home Row) followed by the
- **✓** Third Row (Upper Row),
- **✓** First Row (Bottom Row) and
- **✓** Fourth Row (Number Row).

The fingers of both the hands have to operate the keys allotted to them on each row

Allocation Of Keys To Fingers On The Second Row (Home Row)

- **o** Asdf  left hand ; lkj right hand
- **o** The remaining two keys ‘g’ and ‘h’ on the second row are operated by the forefingers (Index Finger) of left and right hand, respectively.
Allocation of keys to fingers on the third row (upper row)

✓ Move the fingers from A → q & ; → p
✓ This is followed by the placement of the third fingers (Ring fingers) to the adjoining keys ‘w’ and ‘o’ and so on
✓ While typing on the upper row, keep fingers on home row.
✓ Lift fingers of left hand and strike upper row key one by one and type q w e r t (r and t are typed by the same finger)
✓ Now, again lift the fingers of right hand and strike upper row keys one after another and type p o i u y (u and y are typed by the same finger)

We should ensure that one finger should move at a time, while other fingers should remain on the home row.

Allocation of keys to fingers on the first row (bottom row)

Keys Z, X, C, V, B, N, M, Comma, Full Stop and ‘/’ sign are located on this row.

Allocation of keys to fingers on the Fourth Row (Number Row)

In this row, type 1, 2, 3 with little, ring and middle 9fingers of the left hand, respectively, and 4 and 5 with the index finger (forefinger). Similarly type 0, 9, 8 with little, ring and middle fingers of right hand, respectively, 7 and 6 with index finger (forefingers).
Using numeric keypad

- Numeric keypad is used for numeric data entry.
- The numeric keypad has four columns and five rows.
- Home Row 4, 5, 6 and +
- guide key → 5
- right-hand thumb → 0

Allocation of fingers:
**Successful keyboarding tips**

- Press the keys with feather touch and do not put undue pressure.
- Rest your fingers on Home row while typing.
- Allow your fingers to fall naturally on the keys so that each rests on top of the next key along the same horizontal row.
- While typing, release the key immediately as soon as you press it. Holding the key for long time, will repeatedly type the same character.
- Do not look at the keyboard while practicing. • Press the keys with equal intervals of time in rhythm.
- Press the keys only with the fingers allotted for them.
- While pressing a key, say slowly pronounce the character on the key.
- Do not take any mental stress while typing.
- Secure typing ergonomics.
- Maintain patience if committed mistake at initial stage.
- Maintain a balance between speed and accuracy, as both are equally important. Do not sacrifice accuracy for speed.
- To gain mastery of computer keyboard, undertake repeated practice of typewriting words, sentences, passages and figures without looking at the keyboard.

**Using typing software**

There are many software available which are free of cost and are customised to learn typing efficiently and effectively.

Rapid Typing Tutor is a Free and Open Source Software (FOSS) designed to learn typing skills on the computer. It is free to use and share with others for free.

**Touch typing technique**

Learning process involves three stages

**Stage one**

The process begins with learning the Home Row of the keyboard (the row beginning with the Caps Lock key).

This is followed by learning the lower and upper rows, the numbers row, uppercase letters and special symbols.
**Stage two** involves memorizing frequently used syllables and typing words containing these syllables.

**Stage three** involves typing actual text to perfect the skills acquired.

**Touch typing rules**

- The F, D, S, A, and J, K, L, ; keys (on a QWERTY keyboard) represent the base position. Keyboards usually have small protrusions on the F and J keys. They help your fingers locate the base position without looking at the keyboard. Try to return your fingers to the base position after each keystroke. This is nothing but placing and allocation of fingers
- Colour coding shows which finger should press each key (see the picture above). The left index finger is reserved for all the red keys. The right index finger is reserved for green keys, and so forth. Use the thumb of whichever hand is more convenient for you to press the Space key.
- The base position on the numeric pad is the number 5 key for the middle finger, 4 for the index finger, and 6 for the ring finger. The numeric pad simplifies and speeds up numerical data input.
- Uppercase letters and symbols appearing on keys in the numbers row are typed by one hand with the little finger of the other hand holding down the SHIFT key.
- Do not look at the keyboard. Try to locate the right key with your fingers.

**Typing Tutor interface**

The window is composed of the following controls:

**Taskbar** allows to set or change some basic options to start a lesson (keyboard layout, level, lesson, and background).

**Three horizontal button** in the top right corner (Options, About and Help) can display the corresponding dialogs.

**Three vertical buttons** in the top-left corner (Lesson, Statistics and Lesson Editor) are used for switching between current lesson, User Statistics and Lesson Editor.

**Text panel** is the area where the text to be typed is displayed. You can easily edit it in Lesson Editor, if necessary.

**Lesson control panel** includes several controls to pause/resume the current lesson, enable/ disable sounds, and adjust the sound volume.
Keyboard is the virtual keyboard that will help you to learn touch typing with all 10 fingers. You can customise its appearance in the 'Lesson' section.