

(Intro to Computing) :-

Semester # 01:-

Computers Based Information

System:-

Computer Based Information

System (CBIS) is an information system in which the computer plays a major role.

CBIS is an information system used to collection of data, its processing, its Storing and its transmission by using computer.

Such a system consist of the following elements:

- Hardware
- Software
- Data
- Internet
- People / User
- Set of protocols

(i) Hardware :-

Hardware is important to the effectiveness of an information system because most of the software and data are accessed by using hardware. The term hardware refers to machinery.

This category includes the computer itself.

Example:-

Input / output devices

Processing devices

Communication devices

Networking devices

(ii) Software:-

The term software refers to computer programs and the manuals that support them.

Computer programs are machine-readable instructions that direct circuitry within the hardware

parts of Computer Based Information System (CBIS). Programs are generally stored on some input/output medium often a disk or tape.

Software is the programs that are needed to accomplish the input, processing, output, storage and control activities of information systems.

(iii) Data:-

Data are facts that are used by program to produce useful information. Like programs, data are generally stored in machine-readable form on disk or tape until the computer needs them.

It may be consist of numbers, characters, symbols or Images.

(iv) Internet:-

Internet is the network of networks in which users at any one computer can get information from any other computer. By using internet, Users can add a wide range of information to their sites or pages and connect with others. It is also possible to locate facilitate communication among the pre-existing groups of people.

(v) Peoples / Users:-

People are required for the operation of all information system. Every CBIS needs people if it is to be useful. People is the most over-looked element of the CBIS, because they

are the ones in charge of making the hardware and software process data as they should.

Example:-

- End - Users
- Stake-Holder
- Developers
- IT specialist

(vi) Set of Protocols:-

Set of protocols are the policies / set of instructions that govern the operation of a computer system. It is a common analogy that is used to illustrate the role of procedures in CBIS.

-:(Intro to ICT):-

Semester 01:-

CBIS Input Methods:-

Input device:-

An input device is a peripheral device which accept data and send it to the CPU.

These devices are used to input the data.

Example:-

- Mouse
- Keyboard
- Scanner
- Microphone
- Document Readers.
- Light pen
- Touch screen
- Joysticks & game controller.

Mouse:-

Mouse is an pointing device that allows users to move a cursor on the computer screen and select or interact with object displayed. It typically has left and right buttons for clicking, a scroll wheel for navigation.

Keyboard:-

A Keyboard is an input device that allows users to input text, numbers, symbol and special functions Keys. Users press the keys to enter characters and perform various operations.

Scanner:-

A scanner device is a input device used to convert physical documents into digital

form. It captures the text, image and converts it into a digital file that can be stored on a computer.

Scanners are commonly used to scan documents, photos and artwork.

Microphone:-

A microphone is an input device used to capture audio or sound. It converts sounds into electrical signals that can be processed by a computer or other devices. Microphones are commonly used for voice, audio communication and multimedia applications.

Light Pen:-

A light pen is a pointing device that detects light emitted by a computer screen when it is touched with the screen by selecting or drawing objects. Light pens were commonly used on older computer systems but are less commonly used today.

Touch Screen:-

A touch screen is a display that detects light^x allowing users to interact with a computer or device by directly touching the screen. It responds to the user's touch, allowing them to select options, navigate menus, and input data. It is used in smartphones, tablets and laptops.

TouchPad:-

A touchPad is also known as a trackpad. It is a case-sensitive pointing device commonly found on laptops. It allows users to move cursor on screen by sliding their fingers across the pad's surface.

Joysticks:-

A Joystick is an input device primarily used for gaming and controlling certain applications. It consists of a handle or stick that can be moved in different directions and buttons for triggering actions.

Game Controller:-

A game controller is an input device designed specially for gaming purposes. It consist

of buttons, joysticks, triggers, and other controls to navigate and interact with games.

e.g X-box - controller.

Documents Reader:-

Documents Reader is a input device that reads the data, converted into electrical signals and send to the computer.

-Types:-

OMR:-

OMR (Optical Mark Reader) is a system that allows a machine to read lines or mark which have been made the right side on a document, converted into electrical signal that send to the computer.

It uses light to detect

the position of mark on
white paper for getting
information about document.

It is commonly used in
educational organization for
paper checking.

OCR:-

OCR (Optical Character Recognition)
is a AI technology that is
used to recognizes text within
a digital image.

OCR is used to convert the
hand-written document into
digital documents by scanning.

It is commonly used to
recognized text in scanned
documents and images.

MICR:-

MICR stand for "Magnetic ink character recognition." It is used to read text printed with magnetized ink on cheques.

It is used by bank for check processing. Each check contain MICR character at lower-left edge. These characters represent cheque number, bank number and account number.

Barcode Reader:-

Barcode reader uses laser beam to read bar codes printed on products. It converts the barcode into digital signals and send to the computer. It is used in Bakery, Hotels, Pharmacy etc. Barcode contains price, product code of a products.