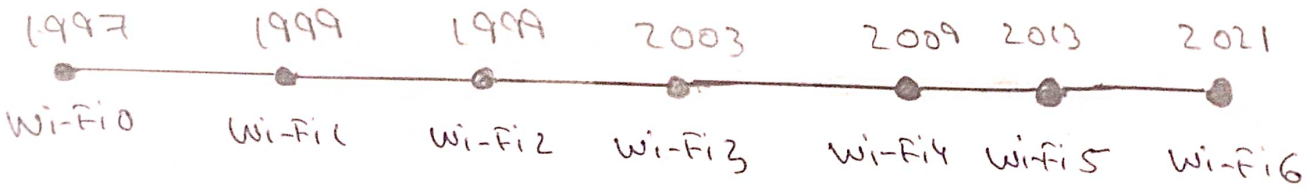
Digital skills

Assignment

① IEEE Standards of Internet (Both wired and wireless)

Ans:-

① Wireless Network:- Wi-Fi came onto the market in 1997 when the pioneering IEEE 802.11 technical standard was published, enabling wireless data transmission at up to 2mbitls using an unlincen-sed 2.4GHz radio spectorum. It's major commerci-al commercial breakthrough came in 1999 when Apple introduced the first mass-marketed consumer products with connectivity. It's Airport wireless base station, and iBook. Since then, the ongoing based on IEEE 802.11b Wi-Fi standards has led to much faster data transmission rates, longer ranges and more reliable and secure connection. All IEEE 802.11 Standard amendments are constructed in a manner such that devices which can operate according to their specificati-ons will be backward compatible so that any modern IEEE 802.11 device can commu-nicate with older products



~~Wireless~~

Wired :- IEEE 802.3

The Ethernet Data Link :-

IEE 802.3 is a combination of standards and protocols defined by the institute of Electorical and Electronics Engineers (IEEE). IEEE 802.3 is also known as the Ethernet standard and defines the physical and media access control (MAC) of the data link layer for wired Ethernet networks.

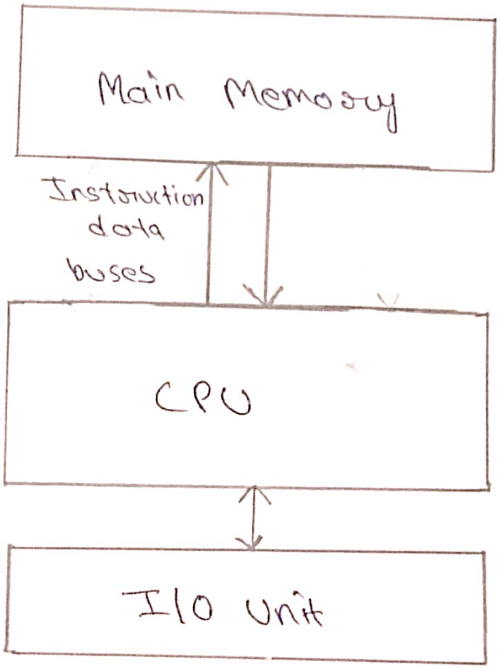
"Ethernet" is the term that's casually applied to a number of very different data link implementation. You will hear people refer to "Ethernet" and they might be referring to the original DEC, Intel, and Xerox implementat of version 1 or 2 Ethernet.

communication standards :-

Ethernet standard	IEEE Approval date/year	Description
802.3a	1985-11	10BASE2 10mbits (1.25mbs) over thin coax
802.3b	1985-09	10 BROAD36
802.3c	1985-12	10Mbits (1.25mbs) repeater spec
802.3d	1987-12	Fiber-optic inter-repeater link

(2) Explain in Detail about Computer Architecture

Ans:- Computer Architecture refers to the end-to-end structure of a computer system that determines how it's components interact with each other in helping to execute the machine's purpose (i.e. processing data), often avoiding any reference to the actual technical implementation.



Von-Neumann Architecture

Computers are an integral element of any organization's infrastructure, from the equipment employees use at the office to the cell phones and wearables they use to work from home. All computers, regardless of their size, are founded on a set of principles describing how hardware and software connect to make them function

(3) Explain All types of Devices present in computer and its operations

Ans:- Types of computer Devices:-

(i) Input Devices:- In the computer, an input device is a part of computer hardware device that is used to provide data and control signals to an information processing system such as a computer or information equipment Ex:- Keyboard, Mouse, Scanner etc.

(ii) Output Devices:- In the computer devices, an output devices is a part of computer hardware device that is used to receive data and commands from an information processing system in order to perform a task. This leads to the results of data processing carried out by the information processing system. Ex:- Speaker, monitor, projector etc.

(iii) Processing device:- In the computer devices, a processing device is a part of component in a computer that manages the storage and retrieval of information. Typical examples of processing devices include central-processing units, computer motherboard, network cards, graphics-processing units(GPU) and sound cards

Best Ex:- CPU, GPU

(iv) Storage devices:- The storage Data - is the recording of information/data in a storage device. Recording is accomplished by any form of energy. memory card, memory magnetic tape, and optical driver devices it requires electrical power to retrieve. The storage devices are mainly categorized in two forms

① Primary storage devices :- The primary storage device is temporarily or permanently stored the information (data in a device that they are known as below:-

(*) Temporary storage device:- The Random-Access memory (RAM) is a form of a computer data storage that stores data the machine code currently being used. A random-access memory device allows data items to read

(*) Permanent storage devices:- The Read-only memory (Rom) is a type of non-volatile memory used in computers and in mobiles. It's mainly used to store firmware (software that is closely tied to specific hardware)

② Secondary storage devices:- Secondary storage devices are primarily referred to a storage device that serves as an addition to the computer's primary storage, RAM and cache memory. Typically, Secondary storage allows for the storage of ranging from a few bits to petabytes (PB); Some of the secordary storage devices are internal to the computer are Hard-Disk Drive, compact disk drive and floppy disk drive

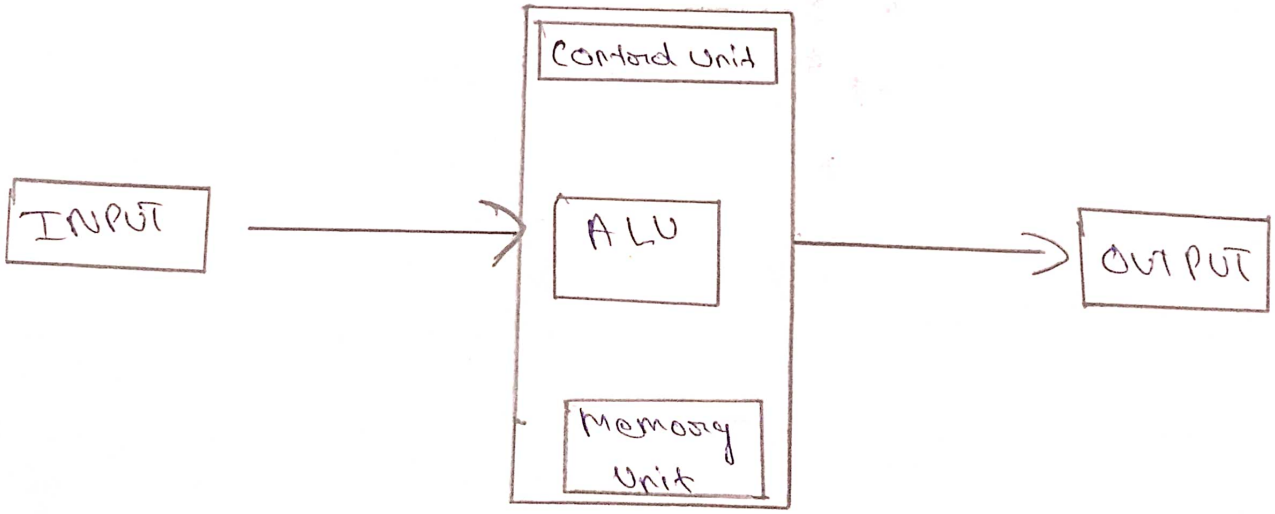
... unit is responsible

(4) Explain CPU Architecture and its operations

Ans:- A central processing unit is the most important component of a computer system. A CPU is a hardware that performs data input/output, processing and storage functions for a computer system. A CPU can be installed into a CPU socket

Different Parts of CPU:-

(i) Memory or storage unit
(ii) Control unit
(iii) ALU (Arithmatic Logic Unit)



(i) Memory Storage Unit:- The memory unit is responsible for transferring information to other units of the computer when needed. It's also known as an internal storage unit as all these storage devices

(ii) Control unit:- A control unit controls the opera-tions of all parts of the computer but it doesn't carry out any data processing operations for executing already stored instructions, it instructs the computer by using the electrical signal to instruct the computer system

(iii) ALU (Arithmetic Logic Unit):- ALU is responsible for performing arithmetic and logical functions or operations. it consists of two subsections :-

(*) Arithmetic Section
(*) Logic Section

(*) Arithmetic Section:- It means operations like Addition, subtraction, multiplication and division

(*) Logic Section:- We mean operations or functi-s like selecting, comparing, matching, me the data, and all these are performed by ALU.