ATM:

- An automated teller machine (ATM) is an electronic banking outlet that allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access cash at most ATMs.
- ATMs are convenient, allowing consumers to perform quick self-service transactions such as deposits, cash withdrawals, bill payments, and transfers between accounts.
- Fees are commonly charged for cash withdrawals by the bank where the account is located, by the operator of the ATM, or by both. Some or all of these fees can be avoided by using an ATM operated directly by the bank that holds the account.

Cont…

- The first ATM appeared at a branch of Barclay's Bank in London in 1967,
- There are two primary types of ATMs.
- Basic units only allow customers to withdraw cash and receive updated account balances. The more complex machines accept deposits, facilitate line-of-credit payments and transfers, and access account information.
- To access the advanced features of the complex units, a user must be an account holder at the bank that operates the machine.

Cont…

- Although the design of each ATM is different, they all contain the same basic parts:
- **Card reader**: This part reads the chip on the front of the card or the magnetic stripe on the back of the card.
- **Keypad**: The keypad is used by the customer to input information, including personal identification number (PIN), the type of transaction required, and the amount of the transaction.
- **Cash dispenser**: Bills are dispensed through a slot in the machine, which is connected to a safe at the bottom of the machine.
- **Printer**: If required, consumers can request receipts that are printed here. The receipt records the type of transaction, the amount, and the account balance.
- **Screen**: The ATM issues prompts that guide the consumer through the process of executing the transaction. Information is also transmitted on the screen, such as account information and balances.

Backup / Restore :

- Backup and restore refers to technologies and practices for making periodic copies of data and applications to a separate, secondary device and then using those copies to recover the data and applications—and the business operations on which they depend—in the event that the original data and applications are lost or damaged due to a power outage, cyber attack, human error, disaster, or some other unplanned event.
- Tape Drive :Tape is the oldest backup medium in use today. It offers low-cost, high-capacity data storage, but relatively slow read/write performance makes tape a poor choice for incremental backup, continuous data protection (CDP) or any other backup method that updates backups whenever data changes

Cont…

- Tape is also more prone to physical wear and damage than other storage media so it needs to be closely managed and constantly tested to ensure that it will work when it's time for recovery. For these reasons, tape is a better choice for nightly or weekly backups or for cost-effectively
- Hard disk drives (HDDs) or solid-state drives (SSDs): Most data today is backed up to a hard disk drive (HDD) or solid-state drive (SSD), whether that drive is a standalone external drive or part of a backup server
- Both offer much faster read/write performance than tape, making them a good choice

Cont…

- SSDs are increasingly popular because they offer faster read/write times than HDDs, require less physical space to store the same amount of data, and consume less power
- Backup server: A backup server is a dedicated server built specifically for backing up files stored on multiple client computers on the same network.
- Cloud backup :Cloud backup backs up your data and applications via a corporate network or internet connection to a physical or (more likely) virtual backup server at a remote data center operated by your company, a hosting provider, or a cloud services provider.

Cont…

- Cloud backup is typically the most flexible type of backup. You can use it to back up files, application data, or entire physical or virtual servers. You can schedule backups as frequently or infrequently as you like.

Hard Copy / Soft Copy :

- **1. Hard Copy :**
  Hard copy refers to the digital document file which is printed on paper or other material like transparency. In hard copy the output is printed on the paper and sometimes it is referred as permanent copy. We can touch the hard copy. We can say it is a physical copy.
  For example- News Paper, Book, Note book, printed document files etc.
- **2. Soft Copy :**
  Soft copy refers to the digital document file or electronic version of a document which is not printed on paper. In soft copy the output is present in the USB drives and computers etc and sometimes it is referred as temporary copy. We can not touch the soft copy. We can say it is a virtual copy.
  For example- ENews paper, Ebook, pdf notes, scanned notes etc.

Bus / Data Bus :

- Alternatively known as an **address bus**, **data bus**, or **local bus**, a **bus** is a connection between components or devices connected to a computer. For example, a bus carries data between a CPU and the system memory via the motherboard.
- The bus contains multiple wires (signal lines) with addressing information describing the memory location of where the data is being sent or retrieved.
- Each wire in the bus carries a bit(s) of information, which means the more wires a bus has, the more information it can address.

Cont…

- **Types of computer buses**
- A bus is either a parallel or serial bus, and either an **internal bus**(local bus) or an **external bus** (**expansion bus**).
- **Internal bus vs. external bus**
- An internal bus enables the communication between internal components, such as a video card and memory. An external bus is capable of communicating with external components, such as a USB or SCSI device.
- **Parallel bus vs. serial bus**
- A computer bus can transmit its data using either a parallel or serial method of communication. With a parallel bus, data is transmitted several bits at a time. However, with a serial bus, the data is transferred one bit at a time.

Cont…

- Below is a listing of the most common buses and how they are used with a computer.
- **eSATA** and **SATA** - Computer hard drives and disc drives.
- **PCIe** - Computer expansion cards and video cards.
- **USB** - Computer peripherals.
- **Thunderbolt**- Peripherals connected through a USB-C cable.

Buffer and Types / Spooling :

- Buffering is an act of storing data temporarily in the buffer. It helps in matching the speed of the data stream between the sender and receiver.
- The main memory has an area called buffer that is used to store or hold the data temporarily that is being transmitted either between two devices or between a device or an application.
- Buffering is an act of storing data temporarily in the buffer.
- It helps in matching the speed of the data stream between the sender and the receiver. If the speed of the sender’s transmission is slower than the receiver, then a buffer is created in the main memory of the receiver, and it accumulates the bytes received from the sender and vice versa.

Cont…

- Spooling stands for Simultaneous peripheral operation online. A spool is similar to buffer as it holds the jobs for a device until the device is ready to accept the job. It considers disk as a huge buffer that can store as many jobs for the device till the output devices are ready to accept them.
- The basic difference between Spooling and Buffering is that Spooling overlaps the input/output of one job with the execution of another job while the buffering overlaps the input/output of one job with the execution of the same job.
- Spooling is more efficient than buffering, as spooling can overlap processing two jobs at a time.
- Buffering uses limited area in main memory while Spooling uses the disk as a huge buffer.

Cursor / Pointer / Icon :

- HW

E-mail / Attachment :

- Email, short for "electronic mail," is one of the most widely used features of the Internet, along with the web. It allows you to send and receive messages to and from anyone with an email address, anywhere in the world.
- Email uses multiple protocols within the TCP/IP suite. For example, SMTP is used to send messages, while the POP or IMAP protocols are used to retrieve messages from a mail server.
- However, in most cases, a user can also send non-text files such as images, videos, and sound files through the mail as attachments.

Cont…

- Emails work in the same functionality as that of traditional paper mail. An email account functions the same way as a mailbox in which the message is stored until it is read by the user.
- An email attachment is a computer file sent within an email message.
- An email attachment can be of many different types such as:
- Image (photo),
- Video,
- MP3,
- Document,
- Zipped file/folder.