- The types of information systems are:
- **Transaction processing system:** storage and collection of data from a transaction and controls decisions made as part of transaction. ***(DAY TO DAY TRANSACTIONS/INFORMATION)*** The two types of TPS:
    - **Batch processions system**: which is waits to collect + store data eg: student information update
    - **Real Time Processing**: which stores + collect data immediately: eg- bank statement
- Characteristics of tps:
    - **Performance:** (rapid response): because it deals with daily transactions eg: receipt printing
    - **Continuous availability** (low downtime): requires daily transaction storage + collection
    - **Data Integrity:** because it the collection is controlled
    - **Ease of use:** workers will need to use it
    - **Module growth**
- **EG**: CASH REGISTER. So will send the data about transactions to manager

- **Management information system**: (middle managers)
    - Reviews the data from the transaction processing system and organises it periodically. The managers will use the internal data to solve structured problems. However, for why questions they get sent to the senior managers.

- **Decision Information System (senior managers):** combines internal and external data to analyse various management decisions. Solves structured and semi structured decisions. The features that help with decision making include:
    - What If analysis
    - Goal seeking
    - Sensitivity analysis
    - Exception reporting

- **Executive information system (What do we do to solve problems internal + external):**
    - Solve unstructured problems at a strategic level. They must be easily used and information easily manipulated (because the executives are too high level to learn how to use) Features:
        - Real time visibility of workplace management activities
        - Layouts must be user friendly and the dashboards must be customisable
        - Reporting of consistent metric and status
        - Place for tracking, management, and reporting on work based on automated interfaces

- **Business intelligence:** Is a tool that helps organisation improve decision making by tracking, processing, and storing and analysing data and transforming these to insights. The insights help make a correct decision
    - More than just providing information, helps with predictive, historical and current views on business operation and environment.

- **Integrating information system**: is the process where you want to bring together components such as sub-systems into one system (information from every system to one). The different ways you can integrate information systems are:

- **Enterprise Resource Planning:** Aims to bridge the communication gap between: all departments and users of information within organisation by providing one central repository for all information shared
    - Operates in real time without relying on periodic update (since erp is home to many departments)
    - Consist of a common repository that supports all application (Reason why is because an ERP has a central repository)
    - consist look and feel across modules (erp funnels all information to repository. Ages ago to go from one information system to another required a change in look. ERP allows a consistent look for all information system)

- **Advantages of ERP:**
    - Gets rid of costly, inflexible legacy systems (more modern funnels the systems. Cost more if more systems)
    - Improvement on work processes (same look and feel modules)
    - Upgrade of technology infrastructure (since erp is integrated system and technology is sophisticated)
    - Improvement of access of quality data for operation decision making

- **Disadvantages of ERP:**
    - Cost (get rid of legacy and new infrastructure)
    - Customisation (updates erp how does it affect my version)
    - Participation of users
    - Vendor lock in

- **Supply chain management:** Is streamlining of business supply-side activities to maximise customer value and gain competitive advantage in marketplace
    - Allows new opportunities for companies to integrate with suppliers and customers to make the cost of service lower (so combines customers and people to make something cheaper. Similar to cos erp is the bridge between user of information + departments. While scm is the bridge between suppliers and companies)

- **Customer relationship management system:** understand and anticipate the needs of what the current and potential customers. This is done to increase loyalty and retention while optimising how produces or services are sold
    - Manage, track, and measure all aspects of customer encounter: marketing, sales, and loyalty programs

Summary:

ERP: processing and reducing cost

SCM: bridge between suppliers and customers to get lowest values

Crms: focus on customers and increasing sales