HNDIT1212: System Analysis and Design

Lecture 01

Outline Syllabus

1. Introduction to System Analysis and Design
2. Software development lifecycles
3. Requirement elicitation and business analysis
4. System analysis and design tools
5. Logical Data flow Design
6. System testing
7. System conversion
8. System maintenance

Introduction to System Analysis and Design

Information system

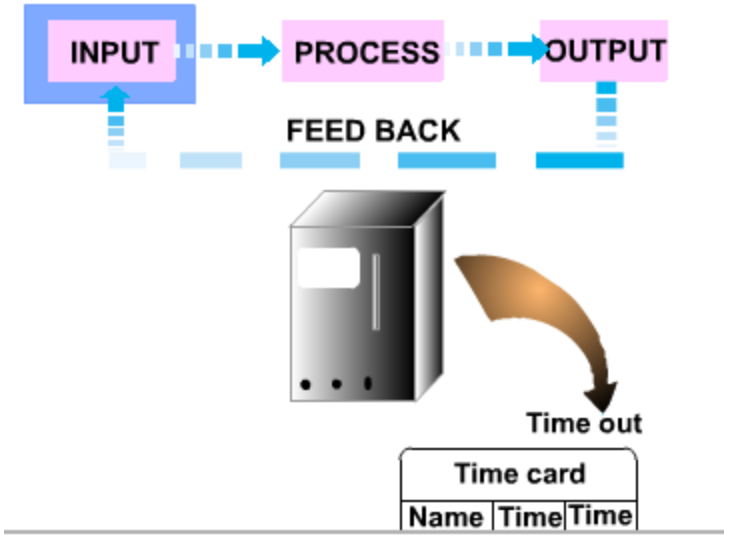
- An arrangement of **Computer Technology** (Hardware & Software) **and Telecommunication Technology** (Data, image, voice) to support and improve day to day operations, problem solving and decision making needs of management and users.

Main components of an Information System

Information systems consist of four **main** components.

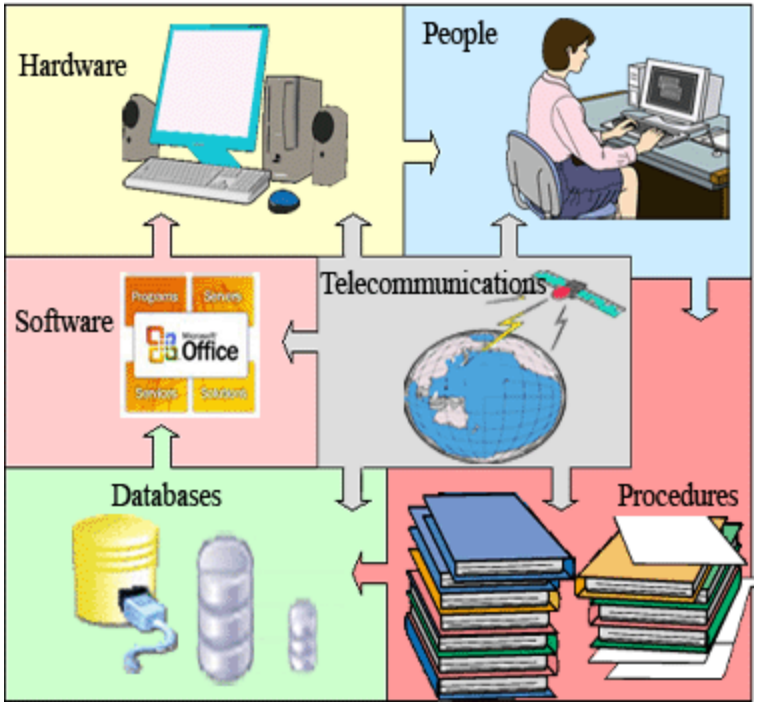
They are,

- Input (collects data)
- Processing (process data)
- Output (disseminates data)
- Feedback



Computer Based Information Systems(CBIS)

- The **resources** of a CBIS include,
  - hardware
  - software
  - databases
  - telecommunications
  - people
  - procedures



System Development Environment

- **Stakeholders**

  Any person who has an interest in an information system and its outputs.

- Mainly, there are **five types** of stakeholders.

  1. Systems User
  2. Systems Owner
  3. Systems Analyst
  4. Systems Designer
  5. Systems Builder

Systems User

- A "**customer**" who will use an information system by,
  - capturing
  - validating
  - entering
  - responding to
  - storing
  - exchanging data and information on a regular basis.

- A common synonym is **client**.
- Systems users define the business requirements and performance expectations for the system to be built.

Systems Owner

- Systems owner is an information system's sponsor and advocate and he owns the final system.
- Pay for the system to be built and maintained .
- Set the vision and the priorities for the system and determine the policies for its use.
- Responsible for funding the project of
  - Developing
  - Operating
  - Maintaining the information system.

Systems Analyst

- System analysts are people who understand both business and computing

Role of system analyst

1. Identify the problem
2. Analyze and understand the problem
3. Identify the solution requirements
4. Identify alternative solutions
5. Design and implement the best solution
6. Evaluate the result

Systems Designer

System designers are technical specialists

Translate systems users business requirements and constrains into technical solutions

They design the system including

- Databases
- Inputs
- Outputs
- Screens
- Network
- Software to meet the users requirements

System builder

- System builders are technical specialists involved with
  - Constructing
  - Testing
  - Delivering the system into operation

- They construct the information system components based on the design specifications from the system designers.