System

A system is a group of independent components that are joined together to achieve an object or to perform any job.

Ex: Computer System, Business System, etc.

Characteristics of a System:

All systems have the following common characteristics:

i) Specific objects: The basic and the main objective of a system is to achieve some goals.

ii) Organization: Organization means implying structure and order. And It is the arrangement of the components that help to achieve specific objectives.

iii) Components: Components are subsystems of the main system which collectively function to achieve the goals of the system. So the components of a system are:

Components of a System

Components are the different parts of the system that collectively function to achieve the goals of the system.

i) Output

ii) Inputs

iii) Processes

iv) Control

v) Feedback

vi) Environment

vii) Boundaries and Interface

i). Outputs

First of all, we must determine what the objectives or goals, what do we intend to achieve, what is the purpose of our work for what is the main aim behind the system. So once we know our aim we can try to achieve it in the best possible way.

ii). Input

Once we know the output of the system then we can easily determine that what are the inputs should be given to the systems.

The essential element of inputs are:

- **Accuracy:** Accuracy means data should be accurate, if it is not accurate the output will be wrong.

-Timeliness: Data should be timeliness because if data is not obtained in time then the entire system definitely falls into areas.

-Proper Format: The data given as input do the system it must be available in a proper or optimized format.

-Economy: Data given to the system as an input must be produced at the least cost.

iii). Processes

The process explains how the input is converted into output. A process is the execution of the data to convert it into meaningful data or information. This involves the program which processes the input data into output data through the computer

iv). Control

Control of the system is the decision-maker that controls the activities of accepting, processing, and producing the output. Each system should have the control components which make the system to operate within tolerable performance levels.

v). Feedback

Feedback gives information that "how well a system is performing". And the feedback can be negative or it can be positive it depends on the different factors.

Positive feedback increases the performance of the system and negative feedback provides information to the controller. On the basis of the

information, action will be taken by the controller to increase the performance of the system to get positive feedback.

vi). Environment

The environment is the external component that has an effect on the system. It often determines how a system must function.

vii). Boundaries and interfaces

Boundaries define the limits of the system. Each system has some limitation which is described by boundaries.

Interface defines the Inter-Relation between the components of the system.