



**Daffodil**  
*International*  
**University**

# Lecture 1: Introduction to Systems

Course Code: CIS 114

Module Title: Information Systems  
Engineering

Module Teacher: Md. Minhaj Hosen

# What is System?

- ▶ A system is a set of interdependent components, organized in a planned manner to achieve certain objectives.
- ▶ System interacts with their environment through receiving inputs and producing outputs.
- ▶ Systems can be decomposed into smaller units called subsystems.

# Characteristics of a system:

- ▶ **Organization**-It implies structure and order. It is the arrangement of components that helps to achieve objectives.
- ▶ **Interaction**-It refers to the manner in which each component functions with other components of the system.
- ▶ **Interdependence**- It means that parts of the organization or computer system depend on one another. They are coordinated and linked together according to a plan.
- ▶ **Integration**- It refers to the holism of systems. It is concerned with how a system is tied together.
- ▶ **Central Objective**- A system should have a central objective. Objectives may be real or stated.

# Elements of a system

- ▶ **Outputs and inputs**
- ▶ **Processors**
- ▶ **Control**
- ▶ **Feedback**
- ▶ **Environment**
- ▶ **Boundaries and Interfaces**

# Categories of System

- ▶ System falls into three categories
  - ▶ Physical or Abstract systems
  - ▶ Open or closed system depending upon their interaction with environment.
  - ▶ Man-made such as information systems.

# What is Information System?

- ▶ Information system deals with data of the organizations.
- ▶ The purposes of Information system are to process input, maintain data, produce reports, handle queries, handle on line transactions, generate reports, and other output.
- ▶ The transformation of data into information is primary function of information system.

# Types of Information Systems

Three major information systems are

- ▶ Transaction processing
- ▶ Management information system
- ▶ Decision support system

# Characteristics of Information Systems

## Summary of Information Systems

<b>Categories of Information Systems</b>	<b>Characteristics</b>
Transaction Processing Systems	Substitutes computer-based processing for manual procedures. Deals with well-structured processes. Includes record keeping applications.
Management Information system	Provides input to be used in the managerial decision process. Deals with supporting well structured decision situations. Typical information requirements can be anticipated.
Decision Support Systems	Provides information to managers who must make judgements about particular situations. Supports decision-makers in situations that are not well structured.



# Relation of information systems to levels of organization

