

CIS11011

ESSENTIALS OF ICT AND PC APPLICATIONS

Systems

Lesson 2

MJ Ahamed Sabani

*Department of ICT
Faculty of Technology
SEUSL*

System

- A **set** of interacting or independent but interrelated parts that **works together** to complete a **specific task(s)** or **objective(s)**.
- Organized and purposeful structure

System Elements

- Inputs
- Processing
- Outputs

System	Elements			Goal
	Inputs	Processing elements	Outputs	
Movie	Actors, director, staff, sets, equipment	Filming, editing, special effects, distribution	Finished film delivered to movie studio	Entertaining movie, film awards, profits

System Elements (contd.)

■ Input

- *The activity of gathering and capturing data*
- *Whatever goes into the computer*

■ Processing

- *Converting or transforming data into useful outputs*

■ Output

- *Useful information, usually in the form of documents and/or reports*
- *Anything that comes out of a computer*

■ System boundary

- *Defines the system and distinguishes it from everything else*

Different categorization of System

- Natural - Artificial
- Open - Closed
- Manual - Computerized
- Stable - Dynamic
- Permanent – Temporary
- Simple - Complex
- Adaptive - Nonadaptive

Natural System

- System that **exist in nature**
- It consist of living and nonliving things
- Created **without any human interaction**

- E.g.
 - *Echo system*
 - *Solar system*
 - *Respiratory system*
 - *Nervous system*

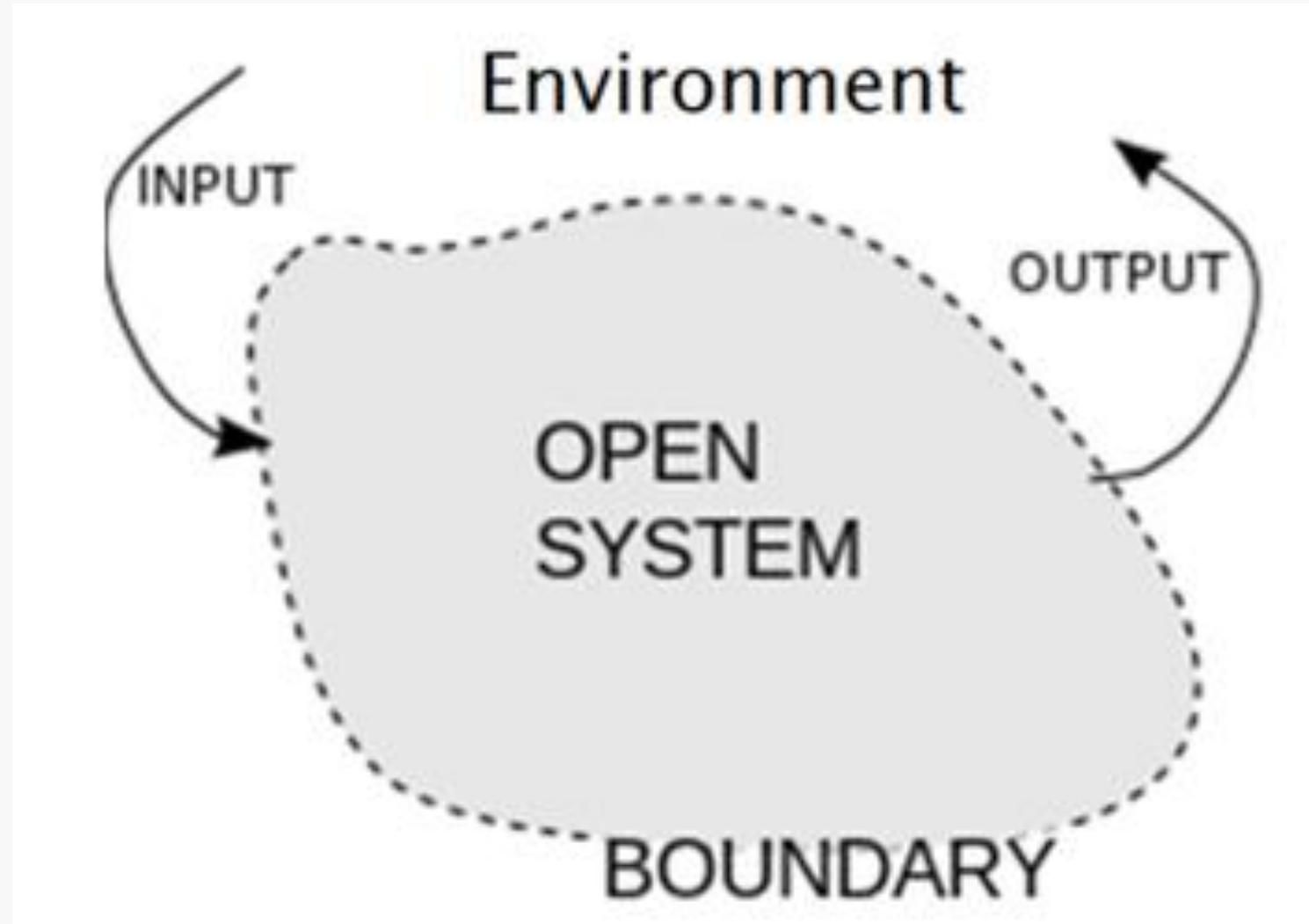
Artificial System

- System that **created by human** to facilitate their works
- Generally designed for a specific purpose, but sometimes for multiple purposes
- E.g.
 - *Computer system*
 - *Education system*
 - *Election system*

Open System

- System that can **have interaction** between its internal components and **external environmental** components
- More complicate to understand
- It exchanges things with external environment beyond the boundary of that system
 - *Input & Output*
 - *Import & Export*
- E.g.
 - *Hospital system*
 - *University system*

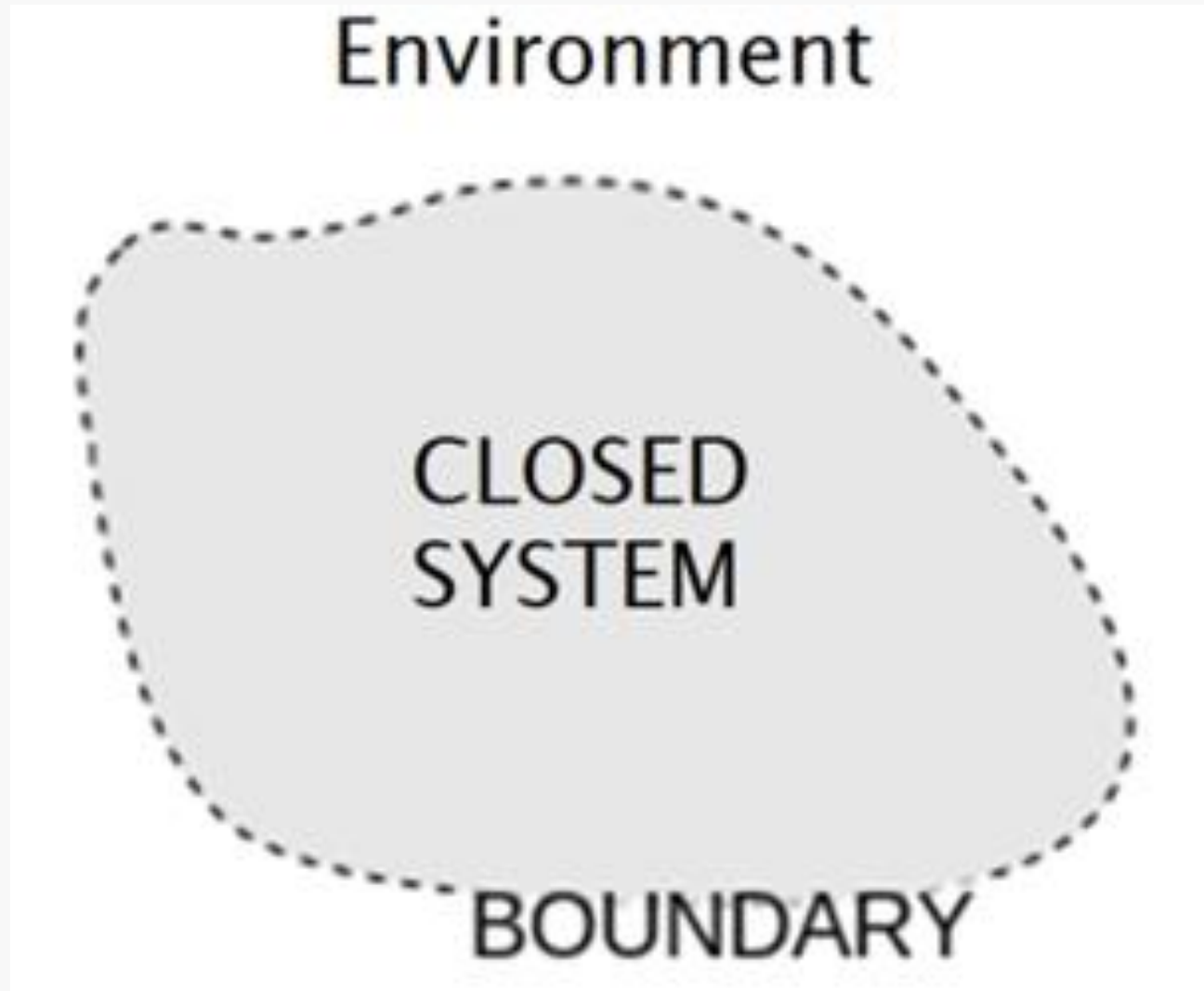
Open System



Closed System

- System that has interaction **only within its internal parts** or components
- All processes are **limited** by the boundary of that system
- No system in the real world is ever perfectly closed, only be an approximation
- E.g.
 - *Equilibrium thermodynamic*
 - in vacuum thermos flask , energy cannot enter to or leave from the system

Closed System



Different categorization of System (Recall)

- Natural - Artificial
- Open - Closed
- Manual - Computerized
- Stable - Dynamic
- Permanent – Temporary
- Simple - Complex
- Adaptive - Nonadaptive



Different Types of systems

- Information Systems
- Computer Systems
- Computer Based Information Systems
- Transaction processing systems
- E-commerce systems
- Management information systems
- Decision support systems
- Expert systems

Information System (IS)

- A set of interrelated elements or components that collect (input), manipulate (process), and disseminate (output) data and information and provide a feedback mechanism to meet an objective
- For many companies, IS is the name of the department responsible for computers, networking and data management while some other companies refer to the department as IT (Information Technology) and MIS (Management Information Services)

Computer System

- Computer related system which allows to **enter input** and **produce desired output** by **process** according to the instructions given by the users
- Its an **artificial** and **open** system
- Is an electronic device, works using electrical power

Different Types of systems (Recall)

- Information Systems
- Computer Systems
- Computer Based Information Systems
- Transaction processing systems
- E-commerce systems
- Management information systems
- Decision support systems
- Expert systems





Thank You