

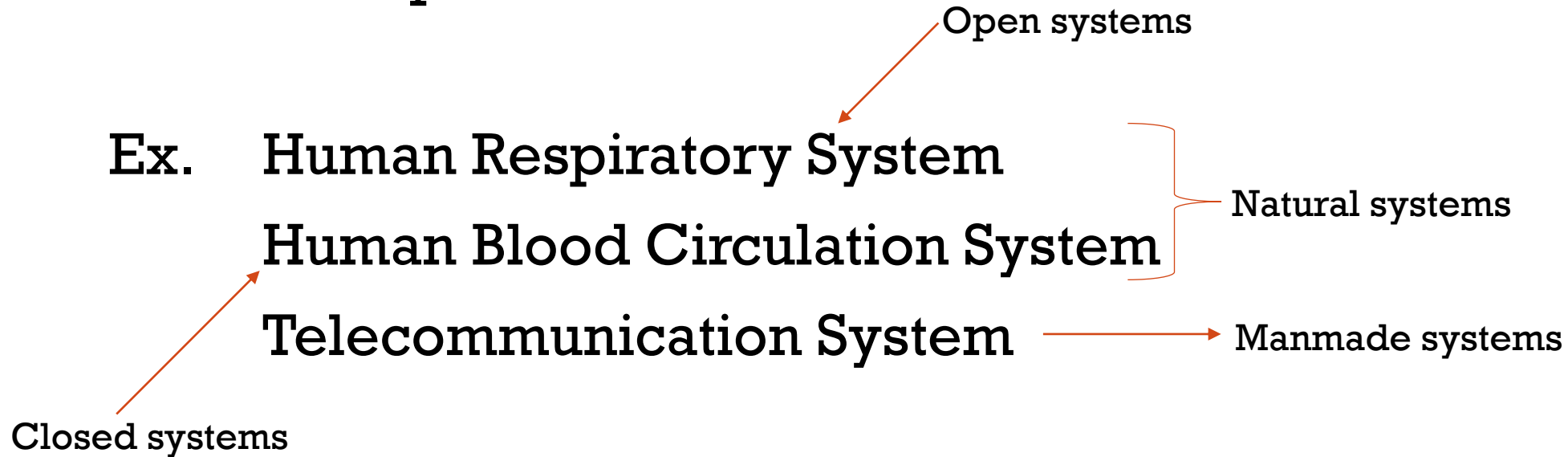
# SYSTEM DEVELOPMENT LIFE CYCLE



# THE CONCEPT OF INFORMATION SYSTEMS

## What is a system?

A system is a collection of components that interact to achieve a specific task.



# BASIC ELEMENTS OF A SYSTEM



❖ Every system has a specific objective or a purpose.



## Ex. Human Respiratory System

### **Objective : Respiration**

Set of events that results in the exchange of oxygen from the environment and carbon dioxide from the body's cells.

**Input** : Oxygen in the air

**Process** :

1. Taking in oxygen from air to lungs
2. Oxygen enters the blood
3. Carbon dioxide leaves the blood
4. Expelling carbon dioxide from lungs to air

**Output** : Carbon dioxide to the air



# INFORMATION SYSTEMS

A system which converts data into Information is known as information system.



Ex. Retail point of sale systems  
Employee scheduling systems  
Market analysis systems  
Web based map services  
Enterprise resource planning (ERP) systems



# Information Systems

```
graph TD; A[Information Systems] --> B[Manual Systems]; A --> C[Computer based Systems];
```

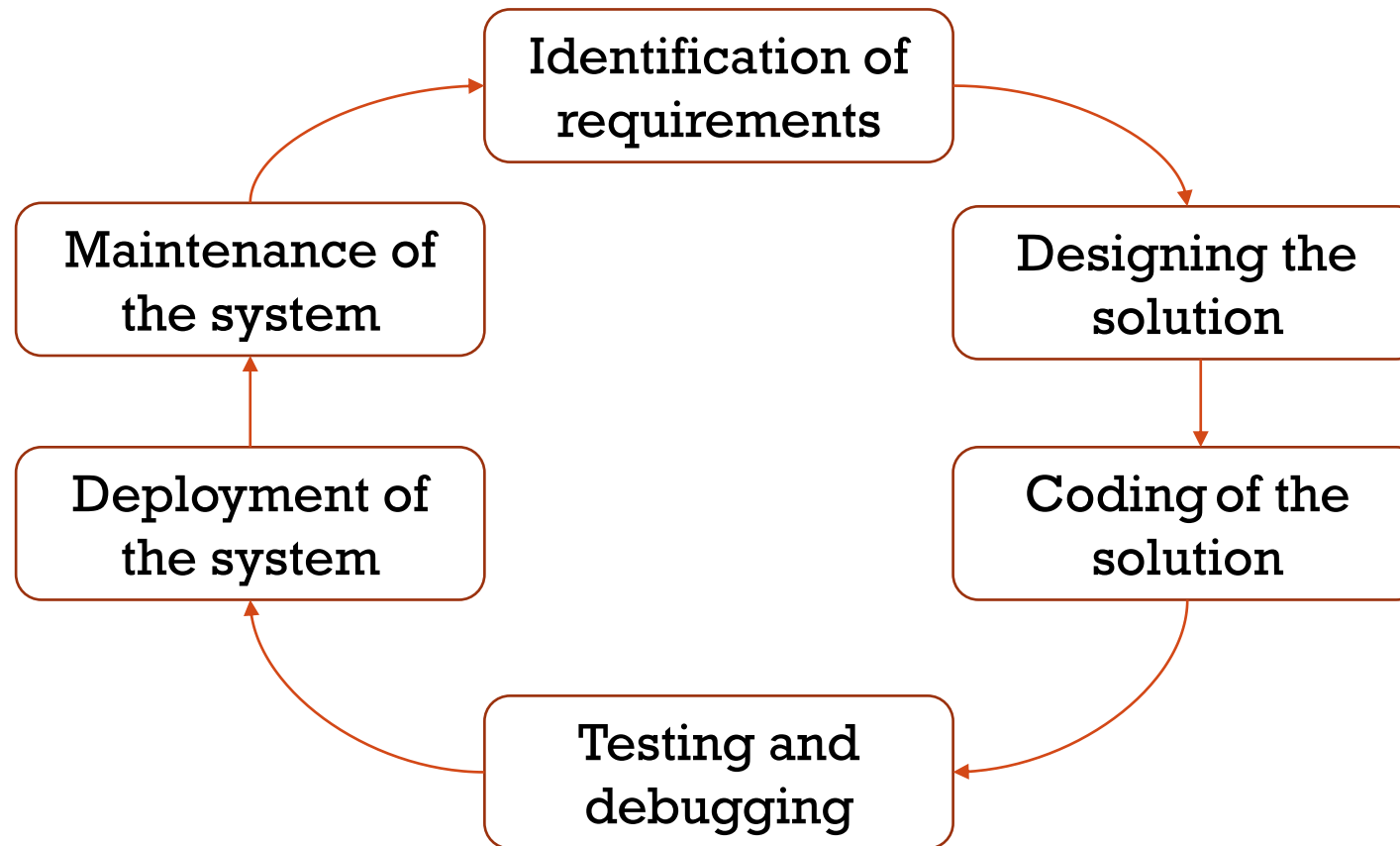
**Manual Systems**

**Computer based  
Systems**



# SYSTEM DEVELOPMENT PROCESSES

## SYSTEM DEVELOPMENT LIFE CYCLE



# 1. IDENTIFICATION OF REQUIREMENTS

## Requirements gathering methods:

- ✓ Observation
  - ✓ Interviews
  - ✓ Questionnaires
  - ✓ Document sample collection
  - ✓ Prototyping
- ❖ System analyst identifies new requirements.





## 2. DESIGNING THE SOLUTION

- ✓ Software and software architecture
- ✓ User interfaces
- ✓ Data bases
- ✓ Hardware systems
- ✓ Dependency among sub-system
- ✓ Test cases

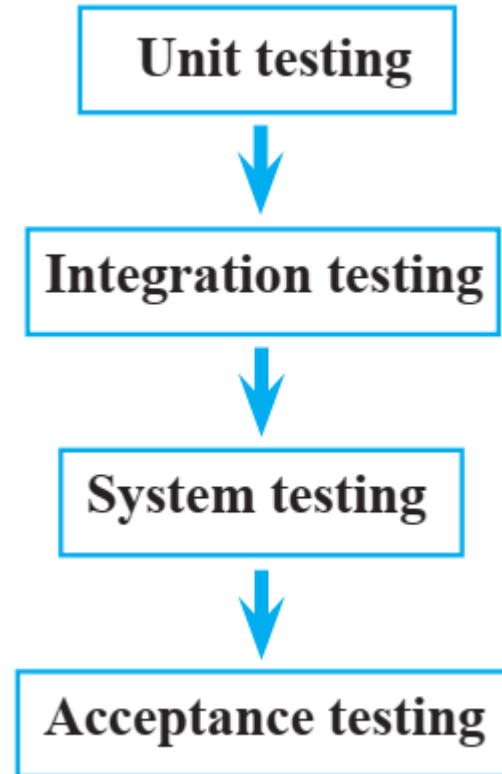


# 3. CODING OF THE SOLUTION

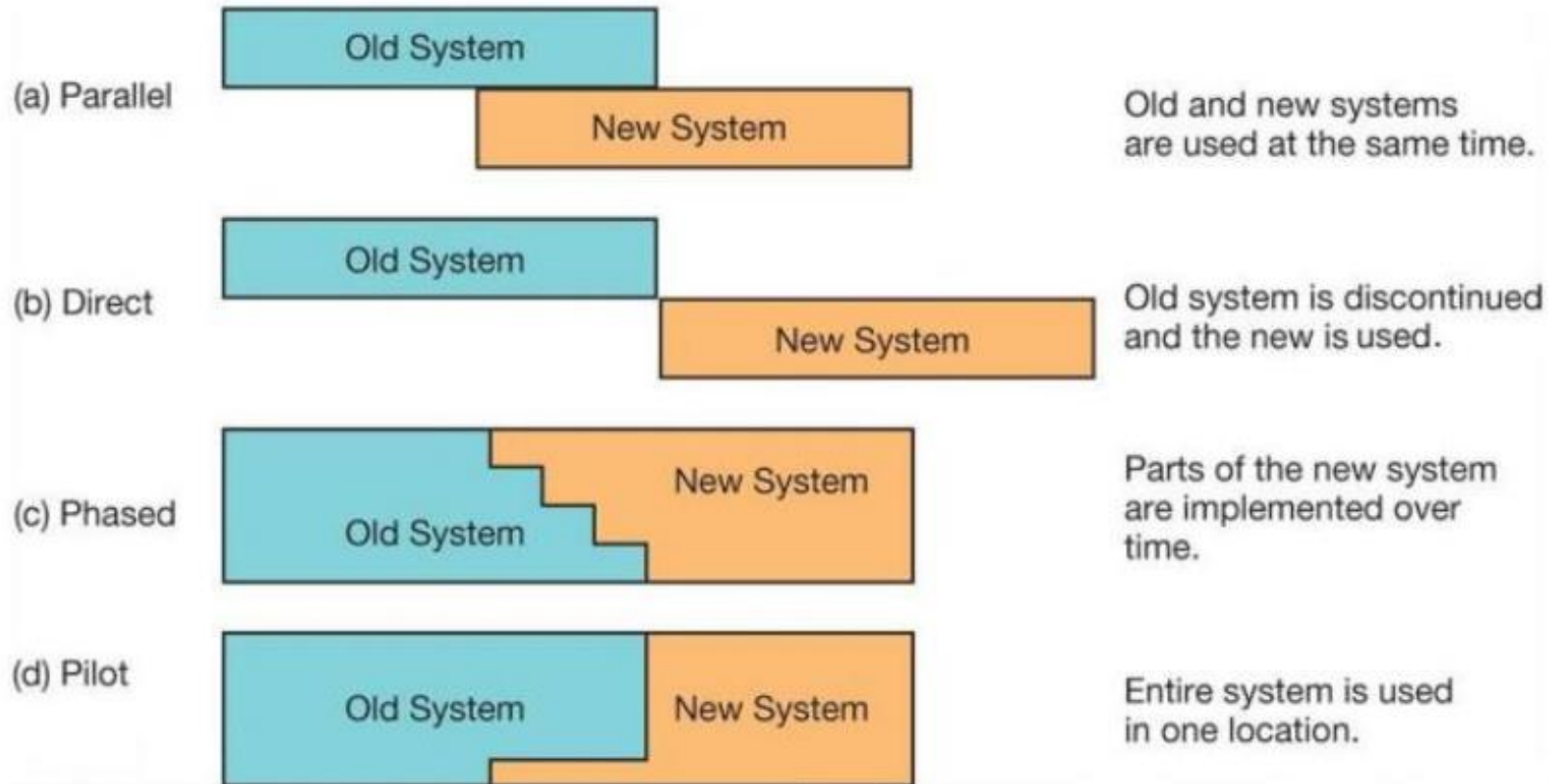
- ✓ Program development
- ✓ Database development



# 4. TESTING AND DEBUGGING



# 5. DEPLOYMENT OF THE SYSTEM



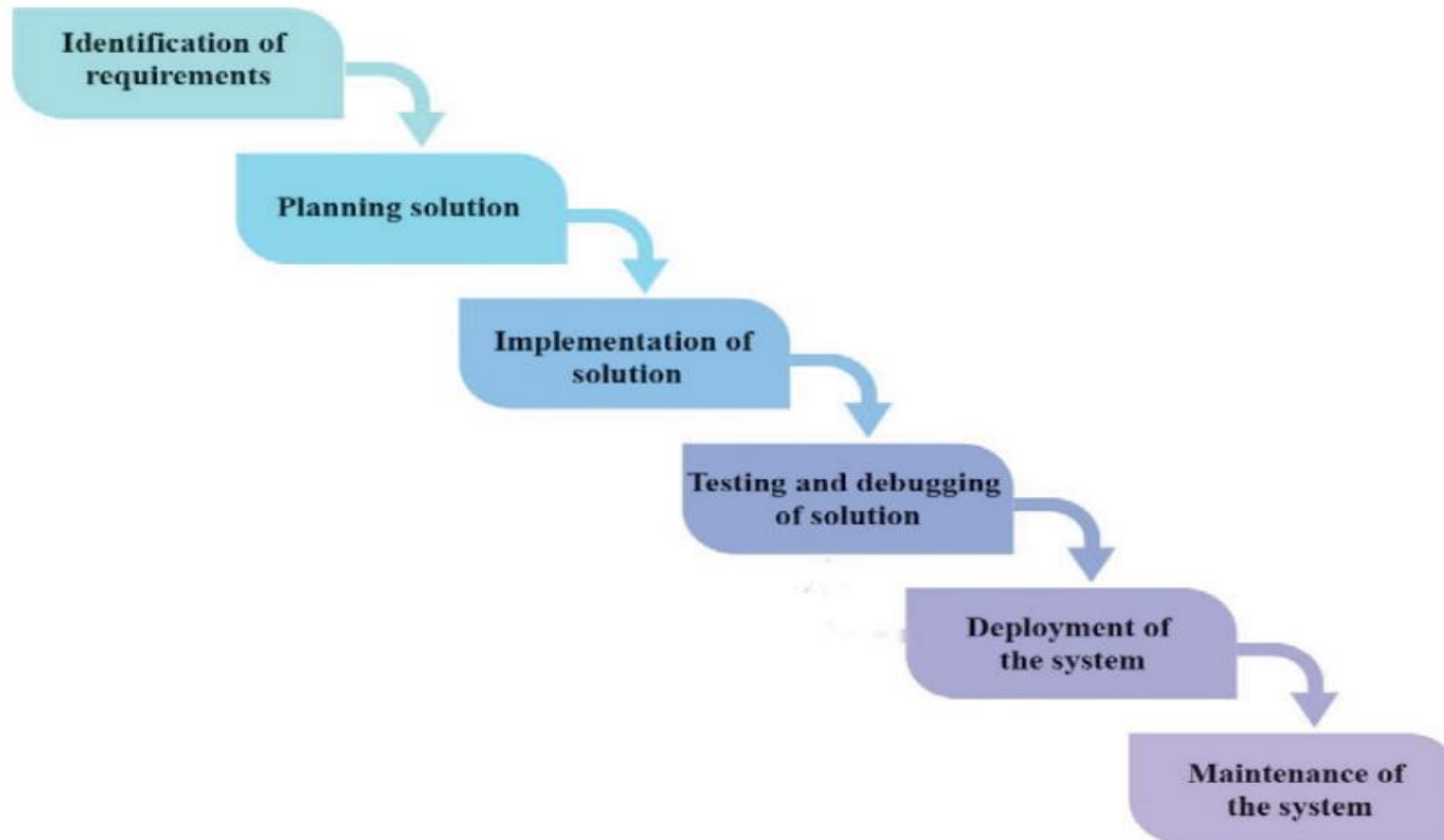
# 6. MAINTENANCE OF THE SYSTEM

- ✓ Making changes to hardware, software, and documentation to support its operational effectiveness.
- ✓ Making changes to improve a system's performance, correct errors, deal with security issues, or address new user requirements.



# SYSTEM DEVELOPMENT LIFE CYCLE MODELS

## WATERFALL MODEL



# ITERATIVE INCREMENTAL MODEL

