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FACULTY OF ENGINEERING & TECHNOLOGY

# BCS-503: Object Oriented Techniques

## Lecture-06

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# OBJECTIVES

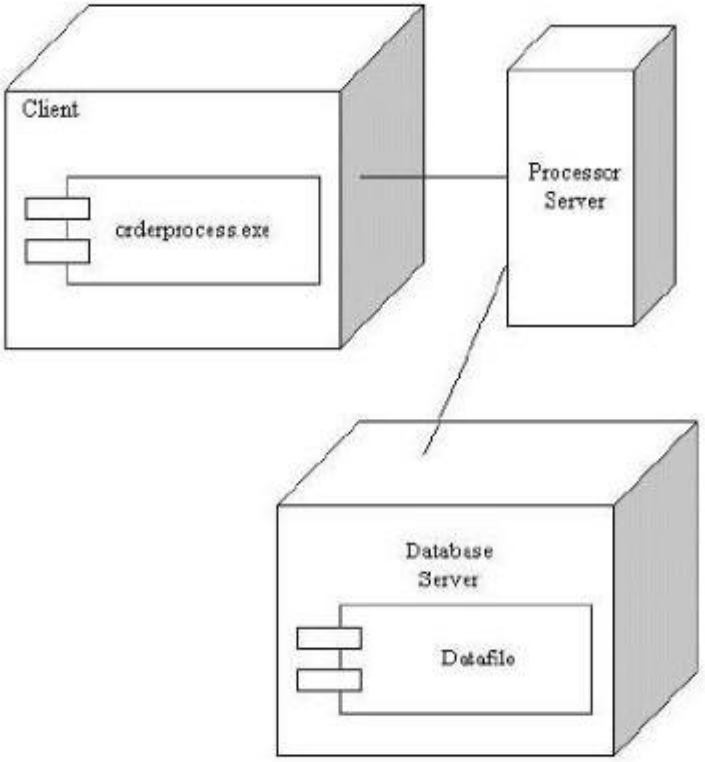
**In this PPT, you will learn to:**

- **Deployment Diagrams**
- **Timing Diagrams**

# DEPLOYMENT DIAGRAMS

- A deployment diagram shows the physical placement of components in nodes over a network.
- A deployment diagram can be drawn by identifying nodes and components.

The following diagram shows the deployment diagram for the order processing system.




*Deployment Diagram for the Order Processing System*

# TIMING DIAGRAMS

- Timing diagrams are used to represent the changes in state and value of one or more objects over a period of time.
- Timing diagrams are often used to design embedded software.
- Timing diagrams are of two types:

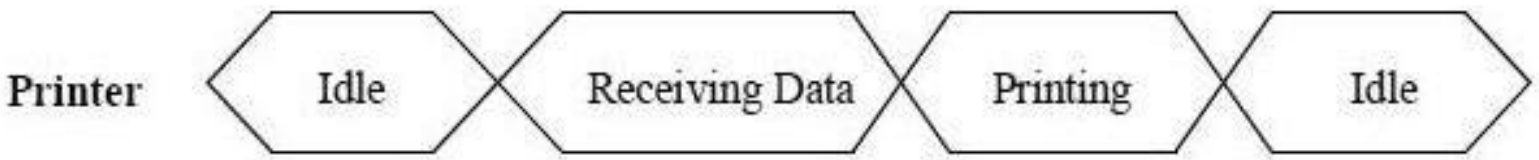
    1) Concise notation

    2) Robust notation

# TIMING DIAGRAMS (Contd.)

## Concise notation

- In the concise notation, a value lifeline is used to represents the changes in the value of objects over a period of time.

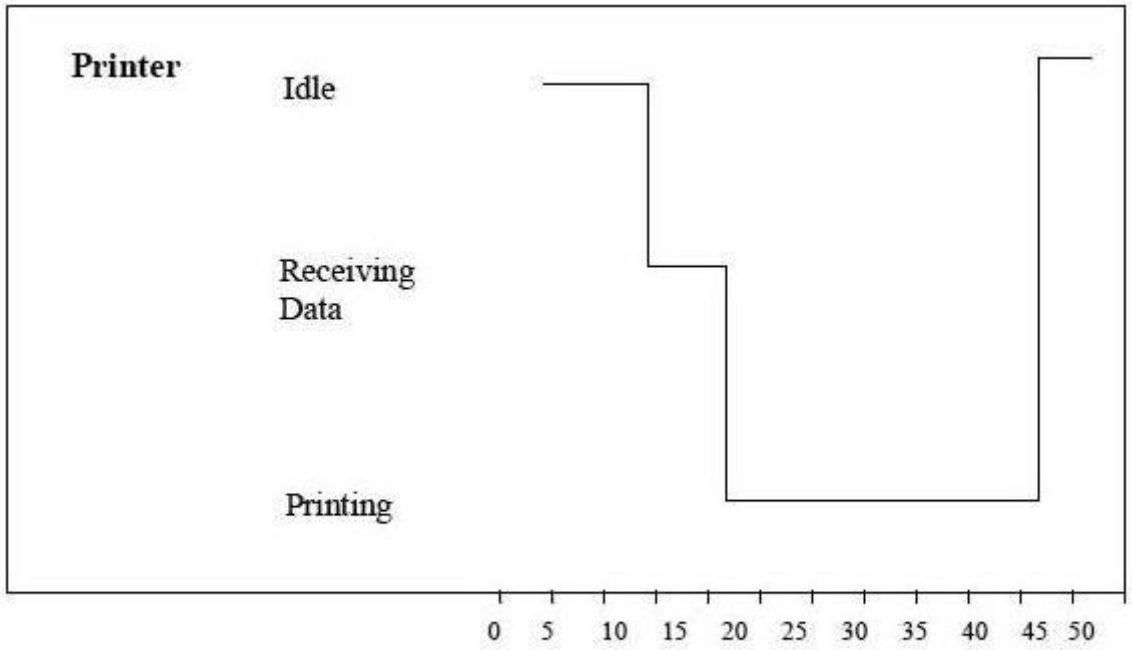



*Concise Notation*

# TIMING DIAGRAMS (Contd.)

## Robust notation

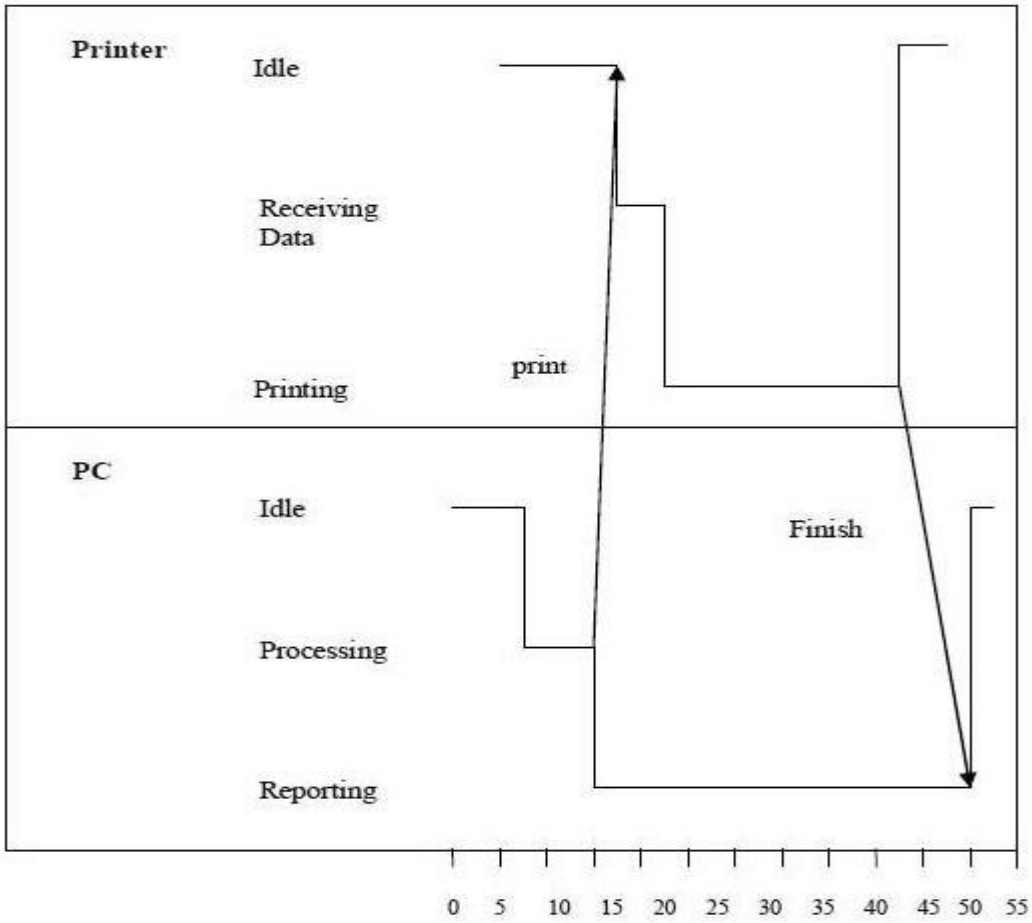
- In the robust notation, a state lifeline is used to represents the changes in state of objects over a period of time.




*Robust Notation*

# TIMING DIAGRAMS (Contd.)

- Lifelines in a robust notation can also be stacked as shown in the following figure.




*Stacked Lifelines*

# REFERENCES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6. Pandey, Tiwari, " Object Oriented Programming with JAVA" , Acme Learning

7. https://www.javatpoint.com/java-tutorial

8. https://www.tutorialspoint.com/java/index.htm

9. https://www.tutorialspoint.com/object_oriented_analysis_design/index.htm

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## Multiple Choice Question:

**Q1. Which among these are the common notations for deployment diagrams?**

a) Artifacts and nodes

b) Stereotypes

c) Components

d) All of the mentioned

## Multiple Choice Question:

**Q2. Which of these are types of nodes used in the deployment diagram?**

a) Device

b) Execution Environment

c) Artifact

d) Device & Execution Environment

## Multiple Choice Question:

**Q3. Which are the ways to represent nodes in a deployment diagram?**

a) Nodes instances are underlined identifiers of the form name:type

b) The name may be left off, indicating an unnamed instance of the type

c) The type may be left off, indicating a named instance with an unspecified type

d) All of the mentioned

## Multiple Choice Question:

**Q4. What does a deployment diagram consists of?**

a) Computational resource

b) Communication path between resource

c) Artifacts that execute resource

d) All of the mentioned

## Multiple Choice Question:

**Q5. Which of the following is incorrect in the deployment diagram?**

a) Communication connections between nodes are shown by communication paths

b) Communication paths are represented by dotted lines

c) Artifacts are deployed inside nodes where they reside and execute

d) None of the mentioned

# Summary

## In this PPT, you learned that:

- The UML diagrams are deployment and timing.