

Chapter 1: Concepts and Principles
You will learn: <ul style="list-style-type: none">• How to appreciate the differences between design and analysis.• Differences between functional and object-oriented approach to design.• Object-oriented terminology.• How to define an object and its characteristics.• The tools of OOD, OOA and OO programming.
Chapter 2: Object Interaction
You will learn: <ul style="list-style-type: none">• How objects interact.• Understand relationships between objects.• Concepts of actors, servers, and agents.• How to utilize inheritance, aggregation, association and instantiation.
Chapter 3: Object-Oriented Design
You will learn: <ul style="list-style-type: none">• Concepts of cohesion and coupling.• Difference between information and functional cohesion in system design.• Encapsulation in OOD.• The practical usage of an abstract data type.
Chapter 4: Class and Components
You will learn: <ul style="list-style-type: none">• What a class is and its components.• Creation and advantages associated with inheritance.• Polymorphism and where it is used in OOD and OOP.

Chapter 5: UML Components

You will learn:

- The purpose and features of UML.
- Components of UML.
- How to show class relationships with UML.
- UML diagrams - basic.

Chapter 6: UML Diagrams

You will learn:

- List the different UML diagrams and their functions.
- Appreciate the philosophy underlying UML.
- The purpose of modeling.
- How to extend UML.