



## Chapter 2

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# **Software Development Processes**



# Review

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- Software cost forms the major component of a computer system's cost. Software is currently extremely expensive to develop and is often unreliable.
- Software is not just a set of computer programs but comprises of programs and associated data and documentation. Each of these items is a part of the software engineering process. The main problems for software development currently are: high cost, low quality, and frequent changes causing change and rework.
- Software has become a limiting factor in the evolution of computer-based systems. The intent of software engineering is to produce a framework for building higher quality software.



# Objectives

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- *Describe the importance of a phased approach to software development*
- *List various phases involved in software development process*
- *Describe how the various phases are organized into processes*



# A Phased Approach to Software Development

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- Consists of various phases
- Each phase ending with a defined output
- The phases are performed in an order specified by the process model

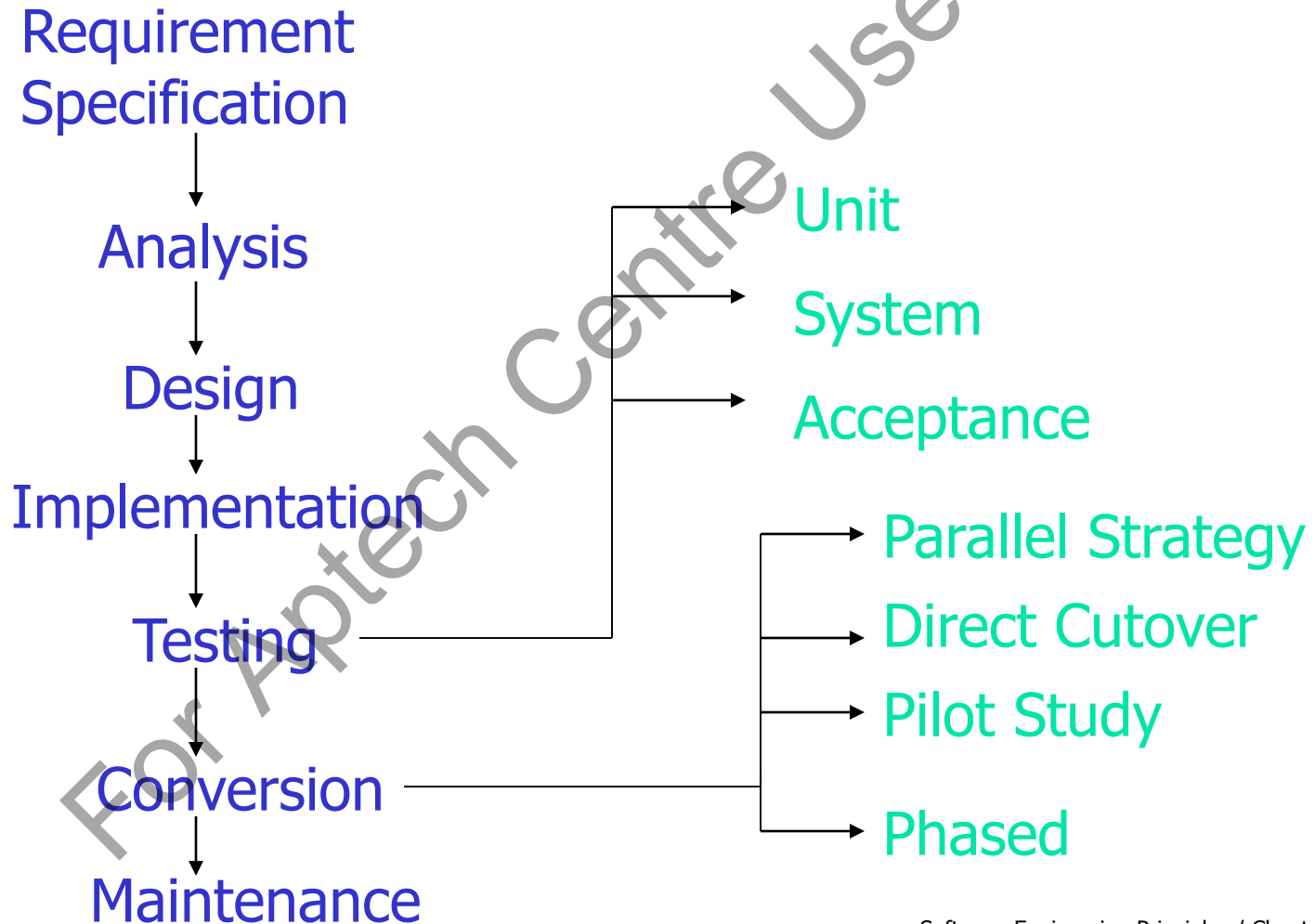


# Development Phases – Why?

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- Breaks the problem of developing software into successfully performing set of phases
- Each phase handles a different concern of software development
- Allows proper checking of quality and progress at some defined points during the development
- Ensures that the cost of development is lower

# Classical Phases in Software Development





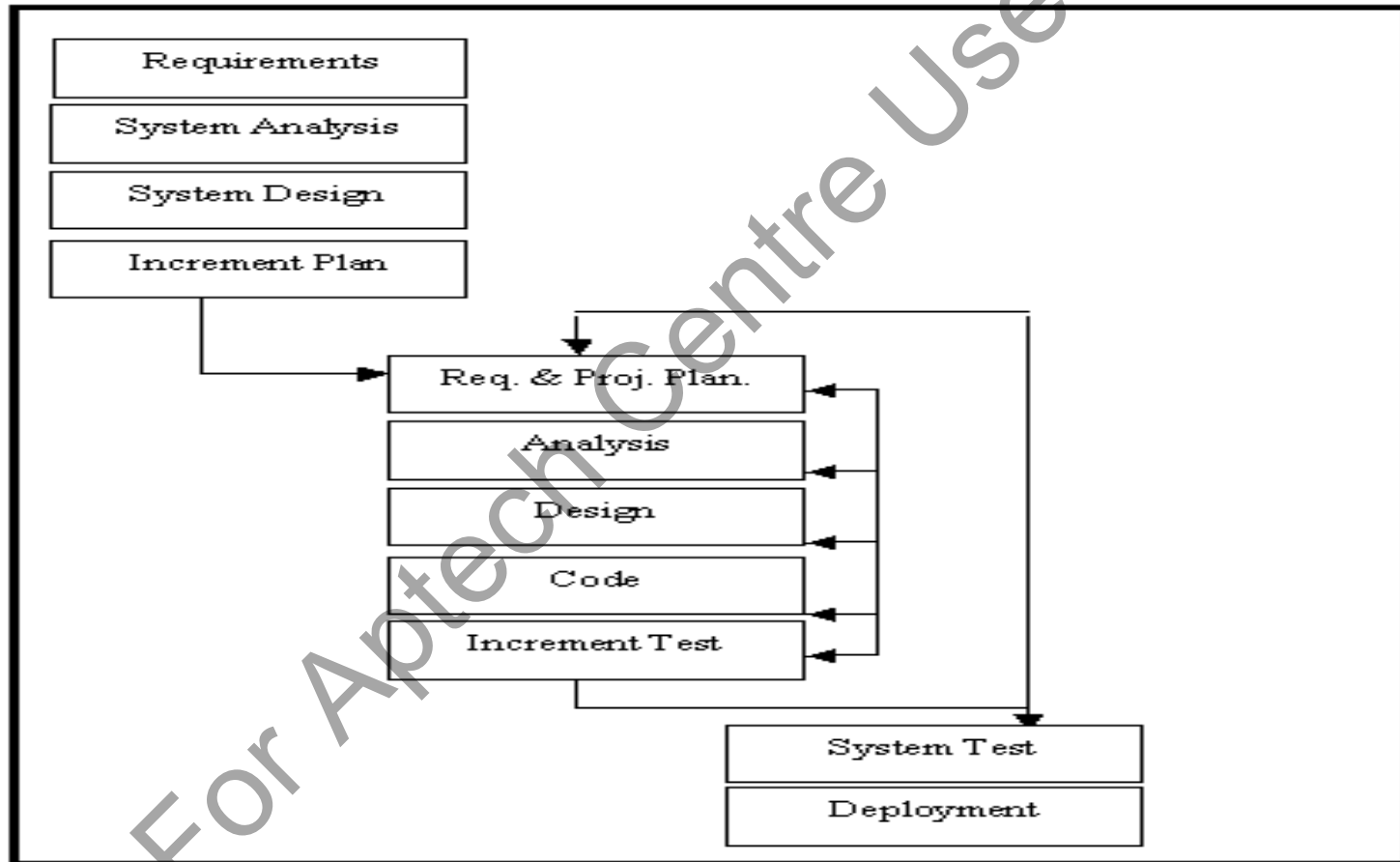
# Phases in a Process Model

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- Requirement Specifications
- Analysis
- Design
- Implementation
- Testing
- Conversion
- Maintenance

# Phases in a Process Model

## Contd...







# Software Development Processes

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- Development Processes
- Project Management Processes
- Software Configuration Management (SCM) Processes
- Process Management Processes



# Summary

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- A development process consists of various phases, each phase ending with a defined output.
- The phases are performed in an order specified by the process model being followed.
- The software development process goes through several phases:
  - Requirement Specifications
  - Analysis
  - Design
  - Implementation
  - Testing
  - Conversion
- A process is a particular method of doing something, generally involving a number of steps or operations.
- The Software development process consists of the following processes:
  - Development Processes
  - Project Management Processes
  - Software Configuration Management (SCM) Processes
  - Process Management Processes