

# Software Engineering - Video course

## **Introduction**

What is Software Engineering.

## **Software Development Life-cycle**

Requirements analysis, software design, coding, testing, maintenance, etc.

## **Software Requirements Specification**

Waterfall model, prototyping, interactive enhancement, spiral model. Role of Management in software development. Role of metrics and measurement.

## **Software Requirement Specification**

Problem analysis, requirement specification, validation, metrics, monitoring and control.

## **System Design**

Problem partitioning, abstraction, top-down and bottom-up design, Structured approach. Functional versus object-oriented approach, design specification and verification metrics, monitoring and control.

## **Coding**

Top-down and bottom-up, structured programming, information hiding, programming style, and internal documentation. Verification, Metrics, monitoring and control.

## **Testing**

Levels of testing functional testing, structural testing, test plane, test cases specification, reliability assessment.

## **Software Project Management**

Cost estimation, Project scheduling, Staffing, Software configuration management, Quality assurance, Project Monitoring, Risk management, etc.



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