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#### Course Goals and Non Goals

- Course Goals
- At the end of this course participants gain an understanding of what is requirement and what is requirement engineering
- Differentiate between two types of requirements Functional Requirement and Non Functional requirements
- What is the importance of requirements in projects?
- What are the characteristics of good requirements?
- What is Requirement Itemization?
- How to use different templates to perform requirement temization with the help of a case study?
- How to manage and successfully execute change in the requirement during Project life cycle?
- What is Requirement Traceability?
- Course Non Goals
- This course does not cover tools training to manage requirements



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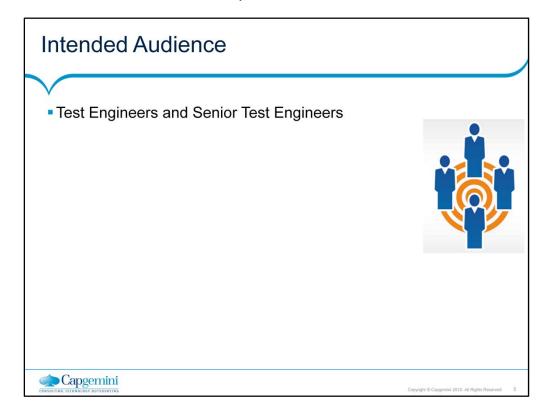


# Pre-requisites

- Fundamental knowledge of Software Testing
- Different types of Software Testing techniques
- Different types of Software Testing



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## Day Wise Schedule

- Day 1
- Lesson 1: Introduction to Requirements Engineering
- Lesson 2: Evolution and Types of Requirements
- Lesson 3: Requirements Itemization
- Day 2
  - Lesson 3: Requirements Itemization (Cont.)
- Lesson 4: Requirements Gathering Challenges & Techniques
- Lesson 5: Requirement Management



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- Lesson 1: Introduction to Requirements Engineering
- 1.1 Requirements Engineering and Projects failure
- 1.2. Why do Projects fail? Current Survey
- 1.3 Requirements Contains Defects
- 1.4 Importance of Requirements Some statistics!
- 1.5 Why do we need good requirements?
- 1.6 What is a Requirement?
- 1.7 Requirement Definition
- 1.8 Why are Requirements important?
- 1.9 Requirements Engineering



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- Lesson 2: Evolution and Type of Requirements
- 2.1 Evolution of Requirements
- 2.2 Who provides the Requirements?
- 2.3 Types of Requirements
- 2.4 Functional Vs Non-Functional Requirements
- 2.5 Do not overlook the "Non-Functional Requirements"!
- 2.6 Non Functional Requirements: FURPS +
- 2.7 Other Non Functional Requirements: "+"
- 2.8 What is a good software requirement?



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- Lesson 3: Requirements Itemization
- 3.1 Requirements Itemization How?
- 3.2 Application Background
- 3.3 Assumptions
- 3.4 Explicit requirements
- 3.5 Implicit requirements
- 3.6 Interface Requirements
- 3.7 Requirements Analysis to Test Scenarios
- 3.8 Testable Items
- 3.9 Non Testable Items
- 3.10 Error Conditions
- 3.11 Application Invocation
- 3.12 Application Termination



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- Lesson 3: Requirements Itemization (Cont.)
- 3.13 File Handling
- 3.14 Requirement Prioritization
- 3.15 Case Study Equipment Tracking System
- 3.16 Template 1 Equipment tracking System
- 3.17 Template 2 Equipment tracking System



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- Lesson 4: Requirements Gathering Challenges & Techniques
- 4.1 Requirements Gathering A Typical Illustration
- 4.2 Requirement Gathering Patterns
- 4.3 Challenges in Requirements
- 4.4 Challenges Clarity of requirements
- 4.5 Challenges Communication
- 4.6 Ambiguity From a Requirements Perspective Pitfalls of the English language
- 4.7 Ambiguity and Pitfalls
- 4.8 Ambiguity Checklist
- 4.9 Ambiguity Review
- 4.10 Requirement Gathering Skills Required
- 4.11 Tips to Requirement Gathering
- 4.12 Identification and Verification of Requirements



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- Lesson 5: Requirement Management
- 5.1 What is Requirements Management?
- 5.2 Why do requirements change?
- 5.3 Stable and Volatile Requirements
- 5.4 Requirements Classification
- 5.5 Baselining Requirements
- 5.6 Requirements Traceability
- 5.7 Types of Requirements Traceability
- 5.8 Requirement Traceability Matrix
- 5.9 Maintaining Requirement Traceability
- 5.10 Requirement Traceability Matrix Simple Example



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- Lesson 5: Requirement Management
- 5.11 Change Management
- 5.12 Change Request Management
- 5.13 Change Management Process
- 5.14 Define Requirement Creep
- 5.15 Why does Requirement Creep occur?
- 5.16 Measures to control Requirement Creep
- 5.17 Requirement Metrics



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