Req. Validation & Functional Decomposition for V&V Automation Testing Lesson 00:

People matter, results count.

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Req. Validation & Functional Decomposition for V&V Automation Testing

| Date | Course Version No. | Software Version No. | Developer / SME | Reviewer(s) | Approver | Change Record Remarks |
|-----------------|-----------------------|-------------------------|---------------------|-----------------------|---------------|--|
| | 0.1D | NA | | | | Content Creation |
| | 0.1 | NA | | | | Review |
| May- 2009 | 1.0 | NA | Priya Rane | | | Material Revamp |
| June- 2011 | 1.1 | NA | Selva Lakshmi P. | | | Material Revamp |
| Aug- 2013 | 2.0 | MS Excel 2003 | Shilpa Bhosle | | | Material Revamp |
| April – 2015 | 2.1 | MS Excel 2010 | Shilpa Bhosle | Mahendra Deshpande | Shilpa Bhosle | Material Revamp |
| Dec- 2015 | 2.1 | MS Excel 2010 | Shilpa Bhosle | Mahendra Deshpande | Shilpa Bhosle | Customized for V&V – Automation Testing LoT |

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 itemization
 - 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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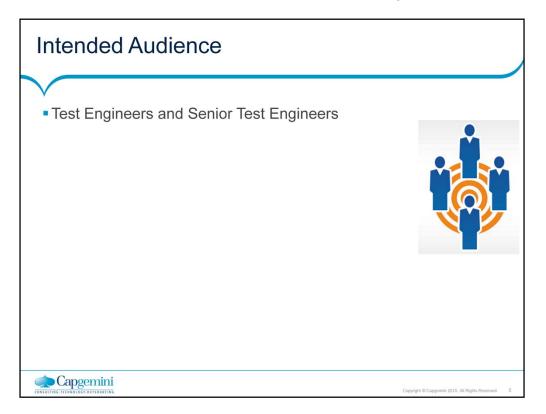


Pre-requisites

- 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
- Day 3
 - Lesson 4: Requirements Gathering Challenges & Techniques (Cont.)
 - 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
- 1.1 Evolution of Requirements
- 1.2 Who provides the Requirements?
- 1.3 Types of Requirements
- 1.4 Functional Vs Non-Functional Requirements
- 1.5 Do not overlook the "Non-Functional Requirements"!
- 1.6 Non Functional Requirements: FURPS +
- 1.7 Other Non Functional Requirements: "+"
- 1.8 What is a good software requirement?



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- Lesson 3: Requirements Itemization
- 1.1 Requirements Itemization How?
- 1.2 Application Background
- 1.3 Assumptions
- 1.4 Explicit requirements
- 1.5 Implicit requirements
- 1.6 Interface Requirements
- 1.7 Requirements Analysis to Test Scenarios
- 1.8 Testable Items
- 1.9 Non Testable Items
- 1.10 Error Conditions
- 1.11 Application Invocation
- 1.12 Application Termination



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- Lesson 3: Requirements Itemization (Cont.)
- 1.13 File Handling
- 1.14 Requirement Prioritization
- 1.15 Case Study Equipment Tracking System
- 1.16 Template 1 Equipment tracking System
- 1.17 Template 2 Equipment tracking System



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- Lesson 4: Requirements Gathering Challenges & Techniques
 - 1.1 Requirements Gathering A Typical Illustration
 - 1.2 Requirement Gathering Patterns
 - 1.3 Challenges in Requirements
 - 1.4 Challenges Clarity of requirements
 - 1.5 Challenges Communication
 - 1.6 Ambiguity From a Requirements Perspective Pitfalls of the English language
 - 1.7 Ambiguity and Pitfalls
 - 1.8 Ambiguity Checklist
 - 1.9 Ambiguity Review
 - 1.10 Requirement Gathering Skills Required
 - 1.11 Tips to Requirement Gathering
 - 1.12 Identification and Verification of Requirements



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- Lesson 5: Requirement Management
- 1.1 What is Requirements Management?
- 1.2 Why do requirements change?
- 1.3 Stable and Volatile Requirements
- 1.4 Requirements Classification
- 1.5 Baselining Requirements
- 1.6 Requirements Traceability
- 1.7 Types of Requirements Traceability
- 1.8 Requirement Traceability Matrix
- 1.9 Maintaining Requirement Traceability
- 1.10 Requirement Traceability Matrix Simple Example
- 1.11 Change Management
- 1.12 Change Request Management
- 1.13 Change Management Process
- 1.14 Define Requirement Creep
- 1.15 Why does Requirement Creep occur?
- 1.16 Measures to control Requirement Creep
- 1.17 Requirement Metrics



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