Course 302: Developing Quality Requirements (4 days)

Course Description…

Requirements constitute the primary driving force for any project. The degree to which the requirements are defined is the degree to which the project is successful. This course specifies how to identify and document quality requirements so as to produce a quality product.

Learning Objectives…

- To determine the difference between gathering information and generating requirements
- To define what requirements really are and why we need them
- To characterize the importance of defining the problem before defining the requirements
- To specify a requirements process as the basis for the software development process

Who should attend…

Business Analysts, Requirements Analysts, Project Managers, and anyone with an interest in a successful software development project.

Prerequisites…

There are no formal prerequisites for this course.

See next page for a detailed course outline…

Course Outline…

Introduction and Overview

Course Objectives

Unit 1: Understanding Requirements

What Are Requirements

- Requirements analyst in the Center
- Project, Product and Process
- The Challenge of Quality
- Why don't we get good requirements?
- What are requirements?
- Business, User, System requirements
- Requirements Aspects

Reason for Requirements

- Relative cost of defect fix
- Linking requirements to the Life Cycle
- Why organization don't get Good Requirements

Requirements Process

- Software engineering Process
- Process overview

Generating Requirements – Overview

- Requirements Development cycles
- Roles in the process

Unit 2: Information Gathering Plan

Preparing an Information Gathering Plan

- Developing the plan
- The Primary questions
- What to gather information about

Sources of Information

- Where is the information?
- Stakeholder constituencies
- Classifying users
- Who has the information?

Methods of Gathering Requirements

- Forms of one-on-one information gathering
- Requirements sessions
- Observation
- Demonstration
- Choosing an approach

Information Gathering Process

Workshop – Information Gathering Plan

Unit 3: Identifying the Problem and Vision

Defining the Problem

- Defining the problem
- Components of the problem
- Basic problem definition
- Identifying the real problem
- Establishing the product vision

The Business Orientation

- Justification
- Product risks
- Business and product constraints
- Context analysis

Establishing Product Scope

- Functional goals
- The Product Scope Formula
- Product glossary
- Delivering the message

Unit 4: Gathering the Information

Six Questions

What information

- How to gather information
- Focuses of information
- Identifying non-functional requirements
- Iterative information acquisition
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Interviewing

- Interviewing levels of the organization
  - Management
  - Stakeholders
  - Users
- The interview
- Success in gathering information
- Building Rapport
- Gaining interviewing skill
- Forms of interviewing
- Getting the most information
- Body language and eye contact
- Categories of questions
- Interview considerations

Information gathering Tips and Techniques

- Meetings
- Brainstorming
- Use Cases and Use case Models

Recording the Information

- Methods of recording
- CRC Card model
- Recording prototype information

Workshop: Developing Use Cases

Unit 5: Requirements Analysis

Modeling and Diagramming Techniques

- What is analysis
- Why Model?
- Modeling the problem and Solution
- Model with a purpose
- Modeling perspectives

Analysis Methods

- Categorization
- Scope Filter
- Process lists
- Diagrams

Deriving the Functional Requirements

- Gap analysis: definition
- Gap analysis: The Process
- Methods for identifying the gap
- Scenarios
- Use Cases
- Gap Analysis Chart
- Developing scenarios

Including the Non-Functional Requirements

- Analyzing the data for non-functional requirements
- Quality issues

Prioritizing the Requirements

- Need for priority
- The Priority Filter
- Constraining the design

Workshop: Modeling requirements

Unit 6: Guidelines to Valid Requirements

Requirements Format and Contents

- Documenting the Solution
- Organizing the document
- Example requirements document format

Requirements Representation

- Quality requirements
- General content recommendations
- Structured English
- Good and valid requirements

Requirements Documentation Guidelines

- Writing valid requirements
- Things to avoid
- Accuracy
- Consistency
- Precision
- Completeness
- Correctness
- Traceability
- Testability
- Validation Filter

Unit 7: Requirements Communication and Management

Requirements Communication

- Steps in Approval process
- Confirmation and approval levels
- Using Use Case to confirm requirements
- Formal approval

Inspecting Requirements

- Review processes
- Inspection and verification methods
- The inspection process
- Checklist for Requirements reviews

Requirements Confirmation and Approval

- Confirmation
- Approval process
- Formal Approval
- Negotiating requirements

Requirements Management

- Need for requirements management
- The Traceability Matrix
  - Tracing the requirements
  - Tracing to Use Cases
- Change Management

Unit 8: The Bottom Line

Developing a Quality Requirements Process
The Process Reviewed
Ideas To Use
Where To Go for Additional Information

Please contact your ROI representative to discuss course tailoring!!!