PROCESS IMPACT

Description: eLearning Seminar "Writing High-Quality Requirements"

Description: This self-paced workshop helps anyone performing the requirements analyst role on a software or systems development project become more proficient at specifying high-quality requirements. It presents extensive advice on how to examine requirements critically for problems and how to write clear, unambiguous requirements of various types. Many practice sessions give students experience in finding requirements problems, distinguishing requirements from design, interpreting customer input, writing precise functional requirements, specifying quality attributes, defining data items and business rules, and choosing alternative ways to represent requirements besides natural language text.

Objectives: On completion of this seminar, the student will be able to:

- Describe the characteristics of high-quality requirements
- Critically evaluate functional requirements and quality attributes
- Review and provide feedback on requirements written by other analysts
- Document project scope, data definitions, and business rules
- Describe the components of a well-structured use case
- Write functional requirements and quality attributes that are more precise, richer in detail, less ambiguous, and more actionable than before
- Derive functional requirements from a use case description

Audience: This seminar will be useful to both new and experienced analysts who wish to learn how to more effectively facilitate requirements communication between the customer and development communities. The concepts described are also applicable to hardware and systems development projects.

Components: 9 course modules
147 slides
7 hours of audio presentation
23 practice sessions
7 quizzes
2 magazine articles and various checklists and work aids

Outline: eLearning Seminar "Writing High-Quality Requirements"

Module 1: Objectives and Agenda (15 minutes)
   A. *Practice session: Your requirements-writing problems*

Module 2: Software Requirements Refresher (60 minutes)
   A. Requirements definition
   B. Three levels of software requirements: business, user, and functional
   C. Characteristics of high-quality requirements
   D. Tips for writing clear requirements
   E. To duplicate or not to duplicate
   F. How much detail do you need?
   G. *Practice session: requirements detail*
   H. Requirements vs design
   I. *Practice session: requirements vs design*
   J. Quiz

Module 3: Reviewing Requirements (53 minutes)
   A. Peer review defined
   B. Who should review requirements
   C. *Practice session: Your requirements reviewers*
   D. Formal and informal review techniques
   E. Guiding principles for effective reviews
   F. Checklists for reviewing requirements
   G. Quiz

Module 4. Depicting Project Scope (35 minutes)
   A. Context diagrams
   B. *Practice session: Drawing a context diagram*
   C. Use case diagrams
   D. Feature levels
   E. Event list
   F. *Practice session: Creating an event list*
   G. Quiz

Module 5. Elements of Requirements Style (41 minutes)
   A. Structure for functional requirements
   B. Write in active voice
   C. *Practice session: Active versus passive voice*
   D. Weak words to avoid
   E. Avoiding requirements ambiguity: negation, omissions, boundary values, synonyms, similar sounding words, pronouns, adverbs, i.e. and e.g., the A/B construct
   F. Avoiding solution ideas
   G. Quiz

Module 6. Using Multiple Requirement Views (38 minutes)
   A. Alternative requirements views
   B. Decision tree
   C. Tables and structured lists
   D. Choosing a requirements model
   E. Listening for key words in user input
   F. *Practice session: Identifying key nouns and verbs in customer input*

G. Relating user input to model components
H. *Practice session: Choosing requirements models*
I. Quiz

Module 7. Some Sample Functional Requirements (43 minutes)

A. Some good functional requirements
B. *Practice sessions: Critique five flawed functional requirements*
C. *Practice sessions: Rewrite three of the flawed requirements*
D. *Practice session: Using alternative requirements views*
E. *Practice session: Reviewing and improving your own requirements*

Module 8. Writing Other Types of Requirements (64 minutes)

A. Nonfunctional requirements
B. Software quality attributes
C. Writing nonfunctional requirements with Planguage
D. *Practice sessions: Critique two quality attribute requirements*
E. *Practice session: Writing quality attributes*
F. Data dictionary
G. *Practice session: Writing data definitions*
H. Business rules
I. *Practice session: Writing business rules*
J. Deriving functional requirements from business rules
K. *Practice session: Deriving functional requirements from business rules*
L. Quiz

Module 9. An Overview of Use Cases (69 minutes)

A. Use cases defined
B. Scenarios and use cases
C. Preconditions and postconditions
D. Normal flow, alternative flows, exceptions
E. Use cases and functional requirements
F. Deriving functional requirements from a use case
G. *Practice session: Deriving functional requirements from a use case*
H. Quiz