Lecture 10

INCEPTION TO ELABORATION

Agenda

- Define the elaboration step.

Elaboration

- The majority of requirements are discovered and stabilized

- The major risks are mitigated or retired

- The core architectural elements are implemented and proven

What is Inception Phase

- may last only one week

- The artifacts created should be brief and incomplete

- It is not the requirements phase of the project, but a short step to determine basic feasibility, risk, and scope, and decide if the project is worth more serious investigation, which occurs in elaboration

Activities and Artifacts in inception

- a short requirements workshop
- most actors, goals, and use cases named
- most use cases written in brief format; 10-20% of the use cases are written in fully dressed detail to improve understanding of the scope and complexity
- most influential and risky quality requirements identified
- version one of the Vision and Supplementary Specification written
- Risk list

Contd..

- technical proof-of-concept prototypes and other investigations to explore the technical feasibility of special requirements

- user interface-oriented prototypes to clarify the vision of functional requirements

- recommendations on what components to buy/build/reuse, to be refined in elaboration

- Candidate Tool List

Elaboration

- the core architecture, clarifies most requirements, and tackles the high-risk issues
- Elaboration often consists of between two and four iterations; each iteration is recommended to be between two and six weeks, unless the team size is massive
- During this phase, one is not creating throw-away prototypes; rather, the code and design are production-quality portions of the final system.

Fuzzy Grouping of requirements

Rank	Requirement (Use Case or Feature)	Comment
High	Process Sale Logging …	Scores high on all ranking criteria. Pervasive. Hard to add late. …
Medium	Maintain Users …	Affects security subdomain. …
Low	…	…

Plans

- **Iteration Plan**
- **Change Request**
- **Software Development Plan.**

What Artifacts May Start in Elaboration?

- ## Domain Model

  - This is a visualization of the domain concepts; it is similar to a static information model of the domain entities.

- ## Design Model

  - This is the set of diagrams that describes the logical design.This includes software class diagrams, object interaction diagrams, package diagrams, and so forth.

Contd..

- Software Architecture Document
  - A learning aid that summarizes the key architectural issues and their resolution in the design. It is a summary of the outstanding design ideas and their motivation in the system.

- Data Model
  - This includes the database schemas, and the mapping strategies between object and non-object representations.

- **Test Model**
  - A description of what will be tested, and how.
- **Implementation Model**
  - This is the actual implementation — the source code, executables, database, and so on.
- **Use-Case Storyboards, UI Prototypes**
  - A description of the user interface, paths of navigation, usability models, and so forth.

References

- Chapter 8 **Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development**