6129COMP Contemporary Software Development

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Lecture number 8

Requirements Gathering Practices

In this session…

- We will look at the requirements gathering in Software Development life cycle.

- Recommended Requirements Gathering Practices

Introduction

- A requirement is a necessary attribute in a system.
- It identifies a characteristic, capability, quality factor of a system in order for it to have value and utility to a user.
- "The most difficult part of requirements gathering is not documenting what the users 'want'; it is the effort of helping users figure out what they 'need' that can be successfully provided within the cost and schedule parameters available to the development team."

Steve McConnell

Requirements

- Each requirement needs to be necessary, verifiable, attainable, unambiguous, complete, consistent, traceable, and concise.

- The process of requirements gathering produces more detailed and creative thinking about the problem that in turn can affect the scope.

Requirements

- Part of the requirements process is to prioritize requirements.
- This is important, since there is no enough time and money to provide everything that is required.
- It is also good practice to focus on product benefits, not features.
  - Benefits represents the necessary requirements.
  - Adding unnecessary features adds design constraints and increases costs.

Recommended Requirements Gathering Practices

- Write and iterate a project vision and scope document
- Provide a project definitions of words that are acceptable and used by customers/users and the developers,
  - A list of acronyms to facilitate effective communication.
- Improve the real requirements by a "joint" customer/user and developer effort.
- Use peer reviews and inspections of all requirements work products.

Preferred Requirements Gathering Techniques

- Interviews. Interviews are used to gather information.
  - Utilising context-free questions by the interviewer helps avoid prejudicing the response
- Document Analysis. All effective requirements gathering involves some level of document analysis
  - business plans
  - market studies
  - requests for proposals
  - statements of work

Preferred Requirements Gathering Techniques

- Brainstorming: involves idea generation and reduction.
- Prototyping: building a quick and rough version of a desired system or parts of that system.
- Storyboards: a set of drawings depicting a set of user activities that occur in an existing or envisioned system or capability. Storyboards are a kind of paper prototyping.
- Modeling: representation of reality that is intended to facilitate understanding

Automated Requirements Tools

- Most projects require industry-strength requirements tool such as Requisite Pro, Caliber RM with capabilities that extend beyond "requirements management."

Summary

- In this lecture we looked briefly at the requirements gathering and the effective way to get the required details from the users without including the unnecessary features.