Lecture_5

Requirements

The aim of the requirements is to answer the question *What must the product be able to do* - We must determine what the client needs - Misconception - We must determine what the client needs - Ex. The client wants a faster software, but the real problem is the database is poorly designed

High-Level Requirements

- Give a general description of what it is the system should do

Low Level Requirements

- How the system should accomplish these goals

Functional Requirements

- Specifies an action that the software product must be able to perform - often expressed by inputs and outputs - Shouldn't be too vague - Calendar - bad example

Nonfunctional Requirements

- How the system is supposed to be, the constraints - Time, ability, scalability, security, reliability - Shouldn't be too vague - Fast, pretty, dark mode - bad example - Some may have to wait until later workflow

Requirements engineering

1) Requirements elicitation - Research and discovering the requirements - Accomplished through discussion with stakeholders and dev team 1) Sufficiently understand the application domain and

terminology 2) Discover the real requirements of the stakeholders 3) Group-related requirements and organize them 4) Prioritize the requirements and resolve requirements conflicts 5) Document requirements 2) Requirements specification 3) Requirements validation

Stakeholders: any person who is affected by the system in some way and has a legitimate interest

- Client, players, retailers, community

Application Domain

- Represents the context/environment in which the application is intended to operate - Banking, Education, Game, Etc - We can't fully understand the application domain

Requirements Discovery

- The process of gathering information about required and existing systems - Interaction with stakeholders is from managers - Formal or informal interviews with stakeholders are part of most RE processes 1) Structured interviews, preplanned questions 2) Unstructured interviews, conversation 3) Semi-structured interviews, preplanned and conversation

Types of Interview Questions

Open Ended - Require a specific answer Close Ended - are posed to encourage the person being interviewed to speak out

Observational Method - Job Shadowing

- Observing users or stakeholders - Two Types... 1) Passive Observation - The analyst watches someone working but does not

interact with them in any way 2) Active Observation - where an analyst asks questions through the process to make sure he understands

Prototyping/Mockups

- provide visual representations of a system that are used to elicit, analyze, and validate requirements - They only exhibit the key functionality - Humans are better at recognizing if a solution is correct than solving a problem from a blank page. Help explore uncertainty in the requirements