Requirements

Administrative stuff

• My office hour
  • Wednesday 2:30pm—4:00 pm
• Class enrollment
• SVN setup
• Warm-up project
  • Due this Thursday
• Questions?
• Quiz
• Project ideas
  • Music engine
  • Game
  • Office center software
  • Forum

Outline

• Definitions
  • Requirement, requirement engineering
• Why?
• How to write the requirement document?

Definitions
What are requirements?

• The services the software should provide
+ The constraints the software should follow

What is requirement engineering (RE)?

• The process of
  • Finding out
  • Analyzing
  • Documenting
  • Checking
these desired services and constraints
is Requirement Engineering

Who will read requirement document?

• Clients
  • Software design people
  • Software development team
  • Software testing people

Motivations
What is the usage of requirement document?

- Help design
- Help implementation
- Help testing

What to put in a requirement document?

What should be included in the requirement?

- Functional requirement
  - Input, output, features, ...
- Non-functional requirement

Non-functional requirements
Non-functional requirements

- Try to use quantitatively measurable metrics to describe them
- Examples
  - Usability
    - The amount of time taken to train a user to use the software
  - Availability
    - The ratio between available time and total time
    - Mean-time-to-failure and recovery time both matter
  - Portability
    - The list of exact platforms where the software can work on

IEEE requirement specification doc template

- Specific requirements
  - External interface requirements
  - Performance requirements
  - Design constraints
  - Standards Compliance
  - Logical database requirement
  - Software System attributes
  - Availability
  - Security
  - Maintainability
  - Portability
  - Other requirements