TTYP – artifacts and effort

- Identify a product and effort in minutes for each task (subtasks are allowed)
  - Write Project Statement (row 1,2)
  - Draft Project Plan (row 3,4,5)
  - Build Draft of object model (row 6)
  - Review object model (row 7)
  - Finalize object model (row 8)
  - Build powerpoint slides (row 9,10)
  - Practice (row 11,12)

Software Requirements

The starting point of software development
Press pp245-334, 539-601
esp pp256-262,299-306,541-582
SOS ch 8

Requirements vs Design

- Requirements is the What
  - user should be able to identify the product by whether or not it matches the requirement specification (a contract for what is to be built)
- Design is the How
  - developer should be able to write code from the design specification

Requirement Specification

- The goal of a requirement methodology is to produce a good requirement specification.
- The goal of a requirement specification is to be able to answer questions about the behavior of the proposed system.

Grand View of Specification

Not all methodologies use all parts

- Object Model shows relations between data and functions
- Use Cases shows functionality
- State Models show behavior of system
- Data Dictionary contains name, type, semantics of all data used or produced

State Diagrams

- Formally, a state of a machine is the value of all the variables, program counter, etc.
- Our use of state refers to a collection of the above states that “behave” the same.
- Transitions between states are usually user actions or inputs
- Classic example is state diagram for vi editor
TTYP Discussion

◆ What questions are left unanswered by the following object model? (even if all attributes and functions were specified)

Purpose of Requirements Phase

◆ produce a complete specification
◆ solve the user's problem
◆ communicate with user
  – understand needs
  – understand proposed requirements
◆ agree on acceptance criteria

Tasks of Requirements

◆ discover user's and purchaser's needs
◆ identify the problem
◆ identify constraints
◆ produce the specification
◆ justify the solution
◆ show the ramifications

Nonfunctional types of requirements

◆ performance
◆ implementation
◆ development restriction
◆ maintenance

Testable Requirements

◆ there should be a finite procedure for determining whether or not the requirements have been satisfied by the delivered product

Thursday, 9/19

◆ Reviews
  – Press pp193-209
  – SOS section 7.2