

Systems Modeling

Lecture/Lab
2009/02/16



Concrete vs. Abstract

- What do you remember?
- How does it relate to Systems Modeling?



What is an example?

- Concrete!
- Wictionary (example):
 - *Something that is representative of all such things in a group.*
 - *Something that serves to illustrate or explain a rule.*
 - *Something that serves as a pattern of behavior to be imitated (a good example) or not to be imitated (a bad example).*
 - *A parallel or closely similar case, especially when serving as a precedent or model.*
 - *An instance (as a problem to be solved) serving to illustrate the rule or precept or to act as an exercise in the application of the rule.*



What role can examples play in software development?

- Documentation
- Design documents
- Models
- Test cases
- Mean to communicate with a customer
- Analysis documents



Example for an Example

Ralph Smith, 33 years old, investment banker for Goldman Sachs, wants relocate within London. He is currently in his private office at his apartment in London/Maidavale. He opens his Webbrowser and selects from his bookmarks inferato.com.

The initial webpage shows in the header: "You are currently located in London/Maidavale". The left sidebar shows the categories "Housing, Events, Jobs, Other classifieds". As Ralf has recently looked for buying a special electric guitar in the n...eds" is pressed. He selects the Hou... automatically deselected and hit shows a description [...]. The second hit shows as desc... Notting Hill with a perfect view facilities."

This is sometimes called *user story*, *scenario* (a scenario is usually longer than a user story), *business case*, or seldom *textual use case*.

He clicks on details, a window pops up showing the id 9920299, that this apartment is for sale, has 3 bedrooms [...]



Scenario (our definition)

- Very concrete story (assume the development project already exists)
- Long (several pages)
- Describing the system to develop
- A case for things happening in and in interaction with the system



User Story (our definition)

- Very concrete example of the problem to solve (assume the development project already exists)
- Very short (less than half a page)
- Write down as:
 - Title
 - Pre condition
 - Action (<3 sentences)
 - Post condition



Example, User Story

- Taken from user-story Wikipedia:

Starting Application

The application begins by bringing up the last document the user was working with.

- Why does this not fit our definition?
 - Structure (no, pre- and post-condition)
 - Not concrete
 - => This is more a use-case (more on this later)



Better Example for User Story

Title: Starting SuperTextEdit the second time

Precondition: SuperTextEdit has just been closed. The document mytext.txt had been edited by the user ulno and “Hello world!” had been written in it. Then SuperTextEdit had been closed and mytext.txt saved. SuperTextEdit is not running.

Action: SuperTextEdit is started again (approx. two minutes later) by user ulno on the same pc. mytext.txt is loaded and the main text-window of SuperTextEdit is displayed with mytext.txt as content.

Postcondition: SuperTextEdit is running and waits now for input and shows a blinking cursor at the end of the Text.



The problem: Elsim Controller

- Demo of multiple elsim elevators
- Demonstration of telnet interface and command line
- Button polling and lamps
- Controller should serve 1-8 elsim elevators, which are located next to each other. Pressing a call button on one elevator should light the corresponding buttons on the other. The next reasonable elevator should come to the corresponding floor.



Task

- Form your teams, try out elsim
- Elect
 - 1-2 “customers”
 - 1 scribe (writes down stories and problems)
 - 1 interviewer
- Create 1 scenario and 5 user stories for the elsim controller
- Some of you will present and we will discuss
- Create 4 more scenarios and 25 more user stories for the elsim controller (homework until 22.2.)

