Discussion about Use Cases and UML

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The Goal of Today’s Discussion

- A brief introduction to use cases and UML
- Create a picture of how use cases and UML are used in systems development
- Context
- Discuss the perspective of use cases and of UML
Why Use Cases and UML?

- De-facto standard. Use Cases are combined with models from UML.
- Many consider use cases to be user centred and to include usability.
What is UML?

Unified Modeling Language (UML) is a graphical notation technique used to create abstract models of software systems. It provides a standardized format for describing, visualizing, specifying, and documenting the artifacts of a software system. UML comprises several distinct notations, such as the use case view, class diagram, and sequence diagram, each serving a specific purpose in the software development process. UML is widely used in software engineering and IT projects to improve communication among team members and with stakeholders.
What is a Use Case?
Example of Template for Use Case

- Use Case
- Short Summary
- Actors
- Goal
- Use Case Diagram
- Activity Diagram

- Incude and extends
- Start/preconditions
- Main course of events
- Alternative paths
- Exceptions
- Stop/postconditions
Main course of events

- Buy parking ticket

1. The Car Driver enters a coin in the Ticket Machine
2. The Ticket Machine indicates until when the Car Driver can park
3. The Car Driver continues with step 1 and 2 until satisfied
4. The Car Driver presses the button to retrieve the parking ticket
5. The Ticket Machine prints the parking ticket
Extensions

Main Success Scenario:

1. The Car Driver enters a coin in the Ticket Machine
2. The Ticket Machine validates the coin
3. The Ticket Machine indicates until when the Car Driver can park
4. ...

Extensions:

2a Invalid coin:
   2a1 The Ticket Machine returns an invalid coin
   2a2 Return to step 1

3a Car Driver aborts transaction:
   3a1 The Ticket Machine returns the coins that have been entered
   3a2 The scenario ends
How are use cases and UML used in software development?

- Visual UML tools
  - Some non-proprietary, some technical etc
- Workshops with end users
Different perspectives - Maps of reality
What is the perspective of use cases and of UML?
Work
Humans

- “Each type of external phenomenon with which the system must interact is represented by an actor” (RUP 2002)

- In use cases the actor is not a person, it is a role that a user (or any external object) can play
Use cases and context of use?
How useful are use cases?

- For system developers?
- For users?

- Different goals? Different ways of seeing.

- "I don’t understand much. I just look out of the window and think: These people know what they are talking about so things will turn out ok"
Do use cases safeguard the essence of usability?

"Use cases, stated simply, allow descriptions of sequences of events that taken together, lead to a system doing something useful”

– Bittner and Spence (2002) Use Case Modeling
Thank you for your attention!