Activity 6-2: Use Case Descriptions

Why?

Use case diagrams provide a static model of user-level requirements. A dynamic model that shows operational-level details is also needed in product design. Use case descriptions provide such a model.

Learning Objectives

- Know the parts of a use case description
- Write good use case descriptions

Success Criteria

- Be able to list the contents of a use case description
- Be able to fill in a use case description template
- Be able to write clear and unambiguous action flows
- Be able to introduce and number extensions properly

Resources

ISED section 6.2

Vocabulary

Precondition, postcondition, trigger, basic flow, extension, branch point, and condition

Plan

1. Review *ISED* section 6.2 individually.
2. Answer the Key Questions individually, and then evaluate the answers as a team.
3. Do the Exercise (based on the Case study) as a team, and check your answer with the instructor.
4. Do the Problem (based on the Case Study) and Assessment as a team.
5. Turn in the Problem and Assessment as a team deliverable.

Key Questions

1. What are the contents of use case descriptions?
2. What are some variations of use case description formats?
3. What are pre- and postconditions?
4. What are branch points and conditions?
5. What is branch point and condition list rationalization?

WebOrder Case Study

A small start-up company wants to market a web-based service to restaurants that will automate order-taking for customers with devices capable of using wireless Internet connections. The product is called *WebOrder*. WebOrder will present customers with menus on their personal digital assistants or cell phones and accept their orders. It may offer additional features as well.

The company does not have much funding so it must produce a first version of WebOrder fairly quickly and cheaply.

Needs elicitation has resulted in the following needs list:

- Restaurant Managers need customers to place orders only from tables in the restaurant.
- Restaurant Managers must not have any sort of installation or maintenance tasks.
- Restaurant Managers and Servers need the product to interface with their current order management systems.
- Restaurant Managers need the product to manage inventory.
- Servers need to do their work at least as fast as without the product.
- Customers need to connect to the web site given only the URL.
- Customers need to see menus and to place orders.
- Customers need to track the status of their orders.
- Customers need to see their bills.
- Customers need to pay their bills.
- Customers need to send messages to servers (bring more bread, more water, the check, and so forth).
- Customers need to interact with the web site without being told how to do so by a person.
- Marketing needs the product to have as many features as possible.
- Marketing and Upper Management need to the product to be highly reliable.
- Development needs the product to be deliverable in about eight months with only a single developer.

Various product design alternatives are under consideration at various levels of abstraction.

Exercise

Draft a use case diagram for WebOrder. Your use case diagram might have use cases such as Place an Order, Enable Interaction, List Orders, and Send Message to Server. Choose one of the use cases to write a use case description for. Your choice should not be so simple that it has a trivial description or so complex that its description goes on for pages. Show the instructor your use case diagram and your chosen use case.

Problem (Deliverable)

Write a complete use case description for the use case you selected. Use the use case template and use case description creation process described in *ISED* 6.2.

Please turn in the following items:

- Your final use case description
- Your initial list of extension branch points and conditions, with a brief notation explaining why list items were eliminated during the rationalization process

Use the following checklist to ensure the quality of your work:

- Every template field is filled in.
- All human actors are stakeholders.
- Every stakeholder's needs are satisfied by the use case description.
- Preconditions are not checked in the use case.
- Postconditions are satisfied no matter how the use case ends.
- Sentences are simple declaratives in the active voice.
- Actors or the product are the subject of each sentence in action flow descriptions.
- The Basic Flow has three to nine steps.
- Physical details are not specified.
- Minimal order is imposed on activities.
- The Basic Flow and Extensions identifiers (numbers and letters) are correct.
- All team members have proofread the description.

Assessment (Deliverable)

1. Did your team improve its performance from last week?
2. Did this activity help you achieve the learning objectives?
3. How could the instructor improve this activity?