Tutorial 7: Use Cases

Introduction to Use Case

Tutor introduces students to requirements specification using use cases. A use case is one or more related user interactions with the system. A use case captures the details for each function of a system. A use case can be basic or extended. A <u>basic</u> use case only describes the normal flow of an interaction. An extended use case includes alternative and erroneous flows. A use case (extended) can be specified in a tabular manner as simple as follows:

Use case	(id) (title)
Actors	Name(s) of user(s) that interact
Description	Short description of the use case
Trigger	A condition that initiates execution of the use case
Pre-conditions	Zero or more preconditions that must be satisfied before the use case can begin
Post-conditions	One or more postconditions that describe the state of the system after the use case is successfully completed
Normal flow:	A list of steps that shows the sequence of interactions between the actor and the system that successfully leads from the preconditions to the postconditions
Alternative flows:	Other ways to also successfully achieve the post-conditions
Exceptions:	All the sequences that will not lead to post-conditions

Exercise: Stock Trader use cases

A trader buys many stocks for different prices and in different quantities. The Stock Trader program keeps track of a trader's investments. This application require user to login before using. A trader can use the program to buy stocks or sell his stocks. The program is required to store information about all stocks owned by a user, including the amount owned and other information that the user may want to record, such as the date and price when purchased. In addition, the program needs to be able to find out the current price of any stock in the portfolio and to compute the current value of the user's investments.

Develop the requirements of the Stock Trader program in two steps:

Step 1: Brainstorm about what features would a user need from the program and how those features are provided to the user. Write the solution in a text document. Also, draw a use case diagram to describe the features of the program.

Step 2: Based on the written solution in step 1, develop written use cases for the Stock Trader program.