NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES

CS3005 –Software Design & Architecture Lab

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Lab 03

Outline

- Getting to know the Use Case diagram
- Introducing the Use Case Diagram
- Where to find the Use Case Diagram
- Elements of Use Case Diagram
- Partial Use Case Context Diagram
- Extends
- Generalization
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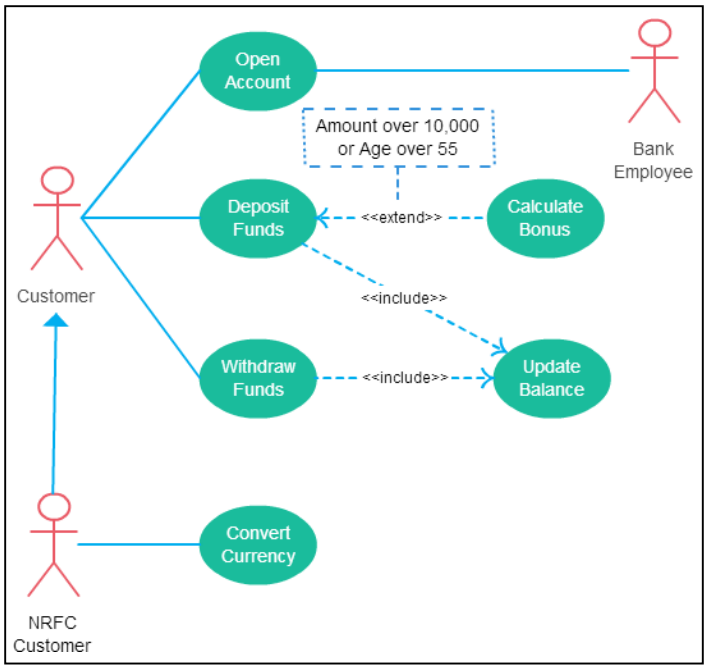
Getting to know the Use Case diagram

The Use Case diagram is one of the Unified Modeling Language (UML) Behavioral diagrams that can be used to describe the goals of the users and other systems that interact with the system that is being modeled.

They are used to describe the functional requirements of a system, subsystem or entity.



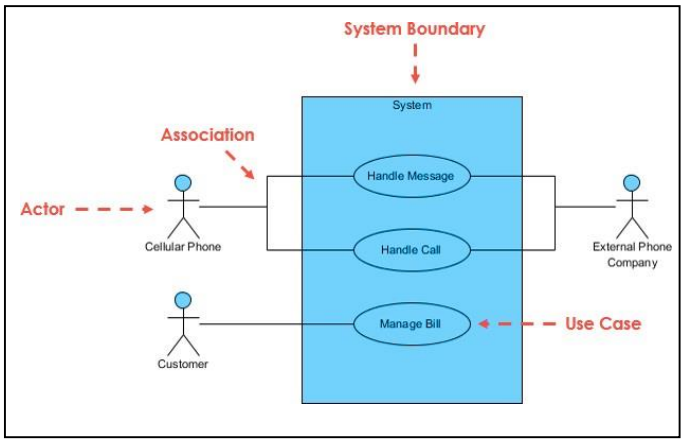
Usage of the Use Case Diagram

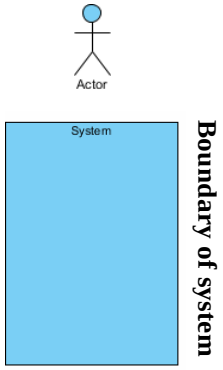
The Use Case diagram is used to describe the goals that users or other systems want to achieve from interacting with the system.

Where to find the Use Case Diagram

- Ribbon: Design > Diagram > Insert > UML Behavioral > Use Case
- **Project Browser** Toolbar : New Diagram icon > UML Behavioral > Use Case
- Project Browser context menu | Add Diagram... > UML Behavioral > Use Case

A standard form of use case diagram is defined in the Unified Modeling Language as shown in the Use Case Diagram example below:

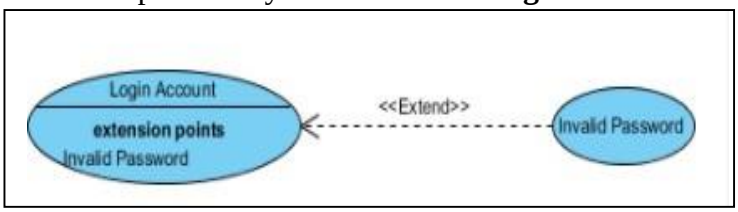




Communication Link

Extends

- Indicates that an **"Invalid Password"** use case may include (subject to specified in the extension) the behavior specified by base use case **"Login Account"**.

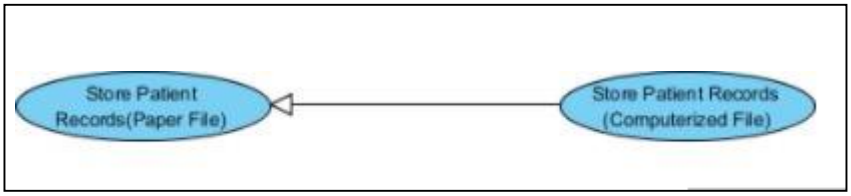


Include

- A uses relationship from base use case to child use case indicates that an instance of the base use case will include the behavior as specified in the child use case.

Generalization

- A generalization relationship is a parent-child relationship between use cases.

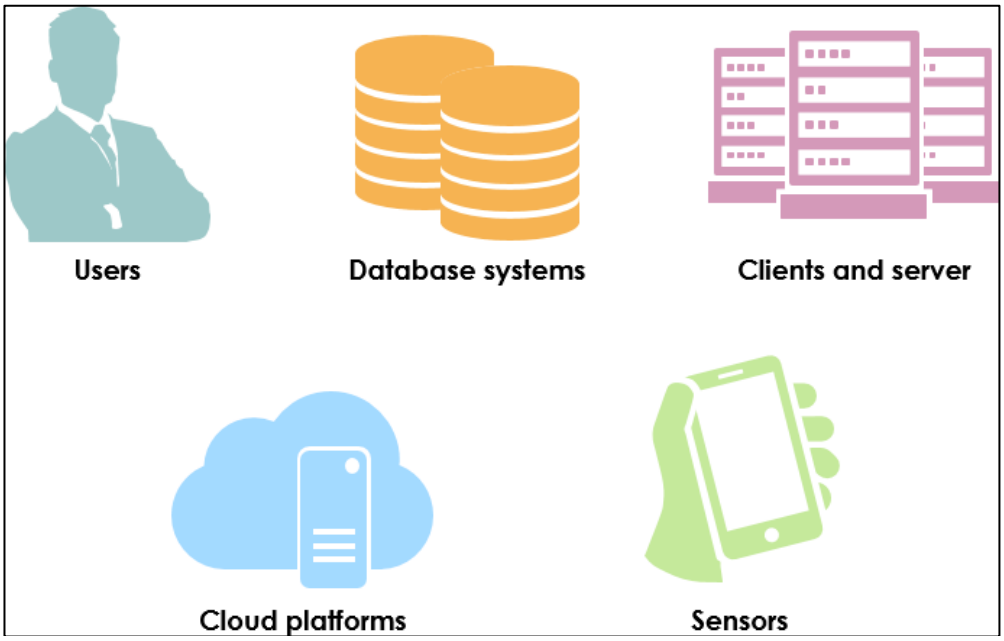


Use Case Description example:

A user clicks the search button on an application's user interface. The application sends an SQL query to a database system. The database system responds with a result set. The application formats and displays the result set to the user.

In this scenario:

- The user is a **primary acto**r because he initiates the interaction with the system (application).
- The database system is a **secondary actor** because the application initiates the interaction by sending an SQL query.



Use Case Examples

Scenario

Online Ordering System is a modern platform that enables you to manage food delivery business activity efficiently. A customer is able to order meal from Online ordering systems. This online food can be used by customer or manager as user that behave as a particular Actor. There are several key steps, for ordering the favorite meal. First they need to login their account with web application using their email id and they see the multiple options in different category and From the listed category they can choose Food item as many as they want. There is very important restrictions, user cannot order the meal without logged in, that means logged in activity must be included with associated actor. System will take a proper confirmation regarding address and payment details. In this Food Online System

there is two options, payment can be made by credit card PayPal or many order options like QR-code. In this system user cannot proceed their order without selecting particular payment method.

Basic steps for making use case on Eclipse-Papyrus.

Go to File other and create Papyrus Project with selective use case diagram.

1. Select “Package” from node palate.
2. Drag three different Actor
3. Drag Four different use cases
4. Create Relation between use cases and Actor.
5. Identify Include and Extends relation nature.