USE CASE DIAGRAMS

WHAT IS A USE CASE DIAGRAM?

A use case diagram is a dynamic or behavior diagram in UML (Uniform Modeling Language). Use case diagrams model the functionality of a system using actors and use cases. Use cases are a set of actions, services, and functions that the system needs to perform. In this context, a "system" is something being developed or operated, such as a web site, system or application. It could even be a business process. The "actors" are people or entities operating under defined roles within the system.

WHY MAKE USE CASE DIAGRAMS?

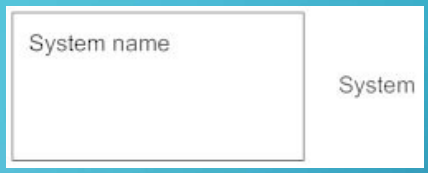
Use case diagrams are valuable for visualizing the functional requirements of a system that will translate into design choices and development priorities.

They also help identify any internal or external factors that may influence the system and should be taken into consideration.

They provide a good high level analysis from outside the system. Use case diagrams specify how the system interacts with actors without worrying about the details of how that functionality is implemented

Elements in Use Case Diagrams

System : Draw your system's boundaries using a **rectangle** that contains use cases. A System is whatever you are developing such as a website, application, or business process etc. . Place actors outside the system's boundaries. Everything that occurs within the application should be put inside the rectangle.



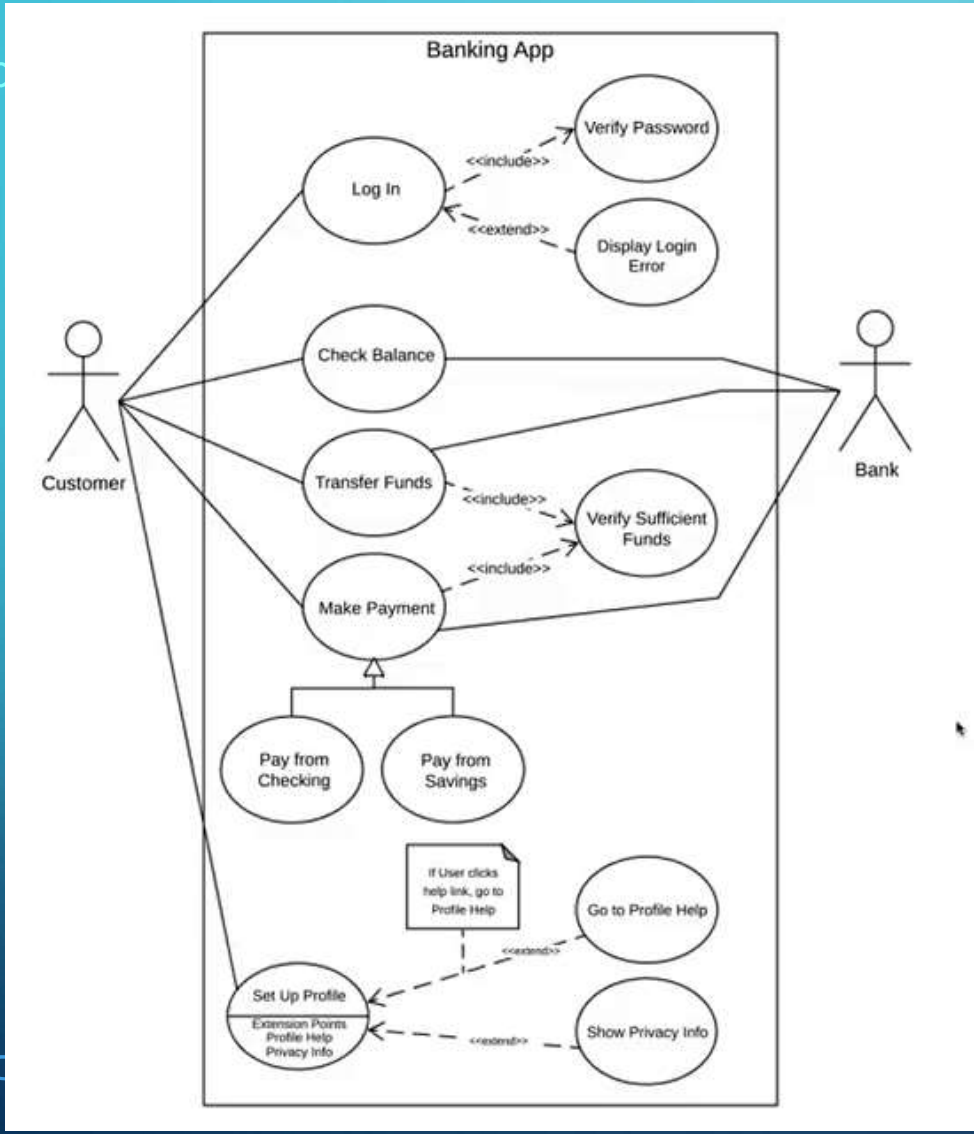
Actors are the users of a system. It could be a customer, an organization or a different system or device. There are two type of Actors: Primary Actor is the one who initiate the use of the system and Secondary Actor is the one who responds or reacts to certain actions with they system. Both types are represented with a **stick figure** with the primary actor on the left of the system
And the secondary actor on the right of the system.

Use Case

Draw use cases using **ovals**. Label the ovals with verbs that represent the system's functions. Use cases are placed within the rectangle if there are any uses that occur within the system. Put Use cases in logical order or when they would occur within the system

Relationships

Illustrate relationships between an actor and a use case with a simple line. For relationships among use cases, use dashed arrows labeled either includes or extends. A includes relationship indicates that one use case is needed by another in order to perform a task. The arrow is drawn from the use case to the included use case. An "extends" relationship indicates alternative options under a certain use case. The dash arrow goes from the optional extended use case to the use case being extended. Inheritance relationships should be drawn with a solid arrow pointing from the child to the parent use case. See following example.



USE CASE EXAMPLE

FROM HTTPS://WWW.YOUTUBE.COM/WATCH?V=ZID-MVO7M-E&FEATURE=YOUTU.BE (UML USE CASE DIAGRAM TUTORIAL BY LUCIDCHART)

Information on these slide was taken from the following sources:

- Class text Doing More With Java – Section 4
- https://www.smartdraw.com/use-case-diagram/
- The above reference Youtube tutorial offered by Lucidchart