

Use Case::-

What is a Use Case Diagram?

A use case diagram is a dynamic or behavior diagram in [UML](#). 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. The "actors" are people or entities operating under defined roles within the system.

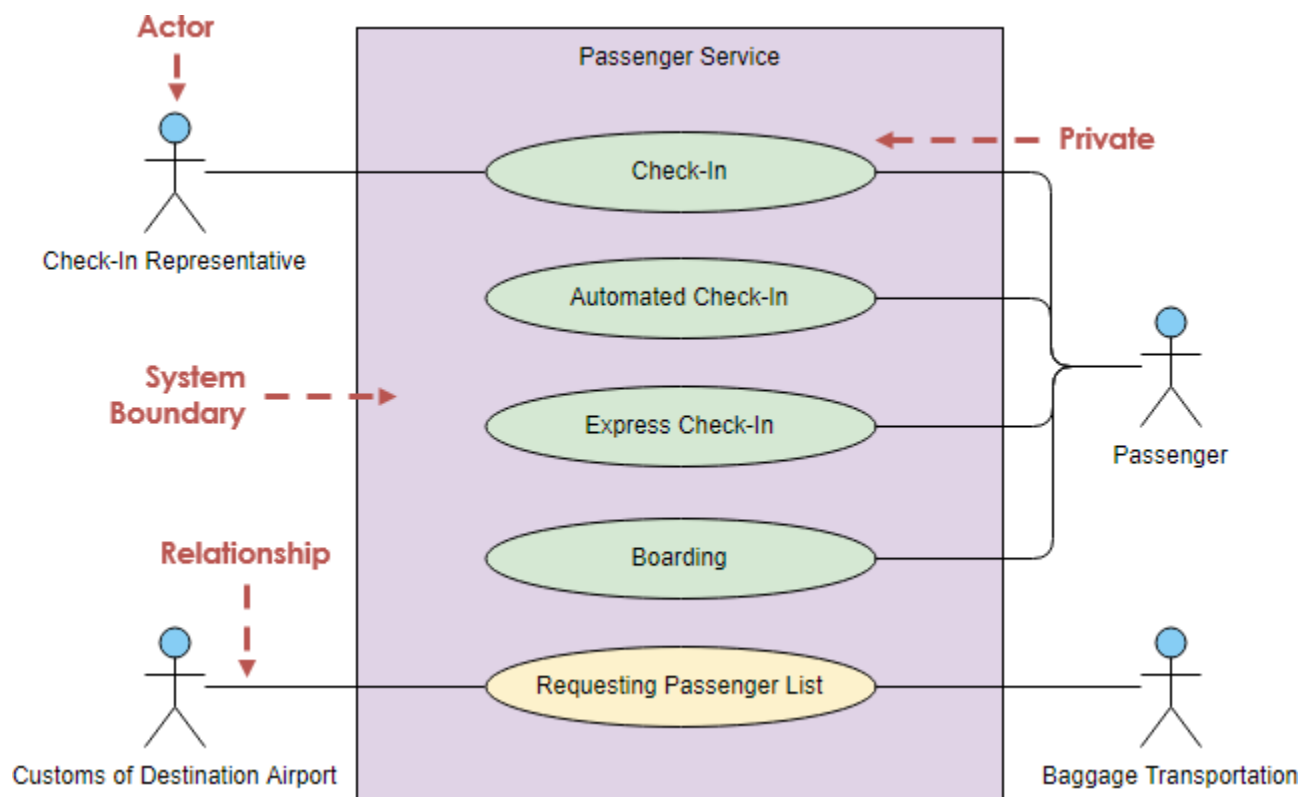
Why Make Use Case Diagrams?

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.

Basic Use Case Diagram Symbols and Notations



System

Draw your system's boundaries using a rectangle that contains use cases. Place actors outside the system's boundaries.

Use Case

Draw use cases using ovals. Label the ovals with verbs that represent the system's functions.

Actors

Actors are the users of a system. When one system is the actor of another system, label the actor system with the actor stereotype.

Relationships

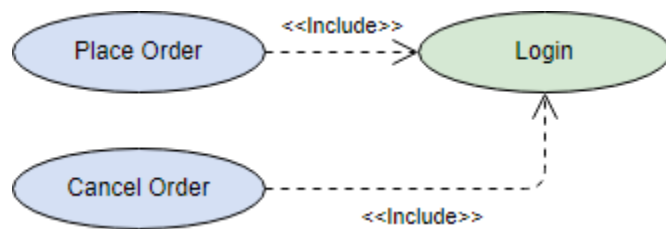
Illustrate relationships between an actor and a use case with a simple line. For relationships among use cases, use arrows labeled either "uses" or "extends." A "uses" relationship indicates that one use case is needed by another in order to perform a task. An "extends" relationship indicates alternative options under a certain use case.

Structuring Use Cases

UML defines three stereotypes of association between Use Cases:

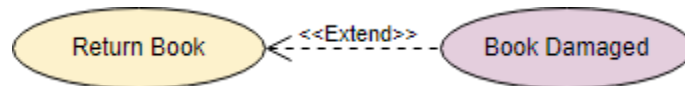
<<include>> Use Case

The time to use the <<include>> relationship is after you have completed the first cut description of all your main Use Cases. You can now look at the Use Cases and identify common sequences of user-system interaction.



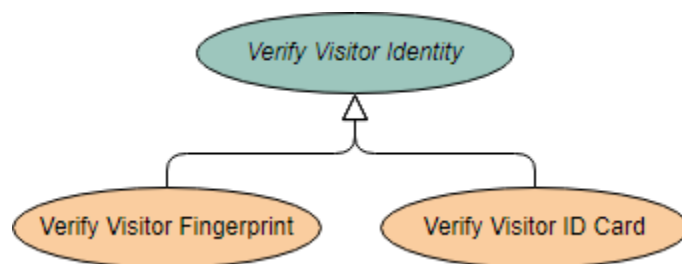
<<extend>> Use Case

An extending use case is, effectively, an alternate course of the base use case. The <<extend>> use case accomplishes this by conceptually inserting additional action sequences into the base use-case sequence.



Abstract and generalized Use Case

The general use case is abstract. It can not be instantiated, as it contains incomplete information. The title of an abstract use case is shown in italics.



Use Case Diagram Examples

The figure below shows an **ATM** use case diagram example, which is quite a classic example to use in teaching use case diagram.

