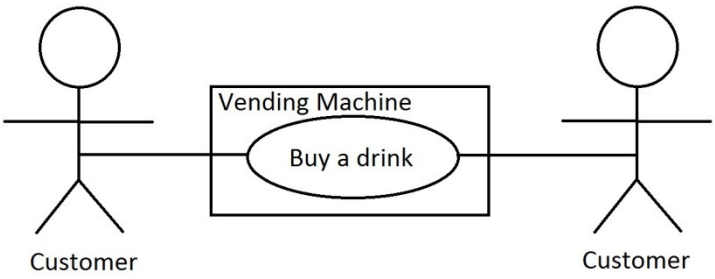
Use Case Models

Use case models are used to describe how something is done. Systems developers use them to help them understand systems requirements from the perspective of a user without everyone having to understand technical jargon. We will examine two types of use case models here, use case diagrams and use case scenarios.

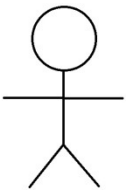
Use case Diagram

A use case diagram is a pictorial method showing the relationship of a user to a system. This diagram contains no technical jargon and is completely self explanatory – you are just trying to find out what needs to be done, not how.

A simple example of someone trying to buy a drink from a drinks vending machine would look like the following

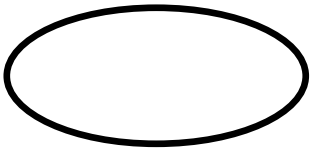


This example is made up of 3 components



Actor – someone who initiates something by their actions (e.g. customer buying a drink). Can also be the person who benefits from the action (e.g. customer who receives the drink) While it is common for the initiator (actor to the left) to be the same as the benefactor (actor to the right), this is not always so.

System – the system they are using (e.g. the vending machine) and show the boundaries between the system and the outside world.



Use case – something they are doing within that system (e.g. buying a can of drink)

Use case scenarios

A use case scenario is a method of describing the sequence of steps in a use case diagram. They typically contain the following information

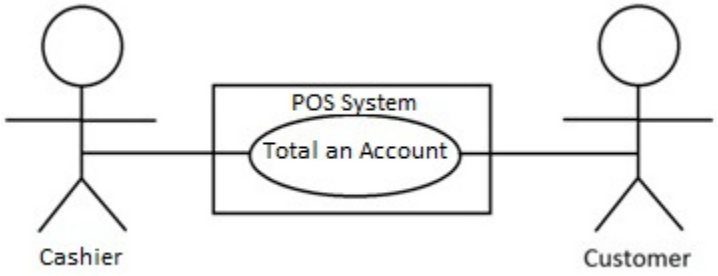
- A one-sentence description of what is occurring
- The actor who initiates the use case from the system point of view. Who enters the system query or command
- Assumptions for the use case
- Preconditions for the use case
- Steps in the scenario
- Post conditions when the scenario is completed
- The actor who benefits from the use case

An example of these would be as follows:

Situation

A restaurant has decided to use handheld wireless devices for all their serving staff. They are creating use cases for different scenarios they have identified, one of which is totalling up a check after guests have finished their meal.

Use Case Diagram



Use Case Scenario

Total an account

Description

- Add up the items in an order

Assumptions

- There is a database of orders accessible to the server's handheld unit
- Each item in the order is attached to its price

Preconditions

- The party has completed its meal

Post condition

- The bill is totalled

Steps

1. The server brings up a list of active orders on the handheld
2. The server selects the appropriate order
3. The server clicks a button on the handheld to total the check
4. The system calculates the total from the process in the order

Benefiting Actor

- Customer