LISBON
SCHOOL OF
ECONOMICS &
MANAGEMENT
UNIVERSIDADE DE LISBOA

Use Case (I)

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"My job as a Business Analyst is to use these words a lot."

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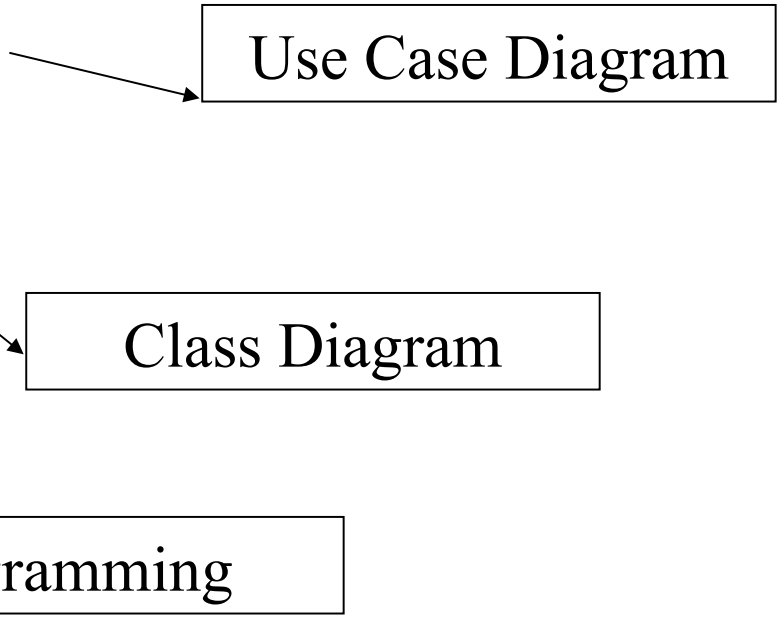
IS Modelling

- Development of information systems
  - Requirements
  - Analysis and Design
  - Implementation
  - Deployment
  - Test
  - ...

Information System Development

- Requirements
- Analysis and Design
- Implementation
- Deployment
- Test
- ...



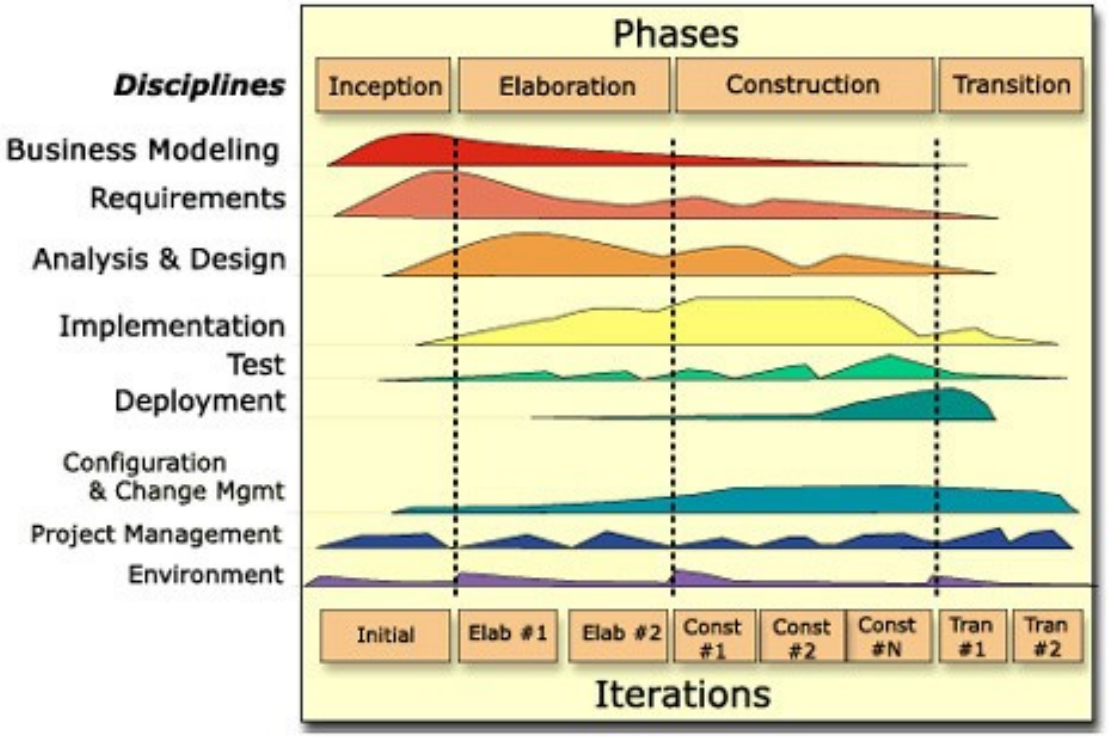
UML

- *Unified Modelling Language*
- *Graphic modelling language*
- *Is a standard language for*
  - *specifying,*
  - *visualizing,*
  - *constructing, and*
  - *documenting.*

the artifacts of software systems

- *Supported in the Concept of Object*

Unified Process



Requirements

Phase in the development system process which identifies what users want from the system.

Requirement (Booch et al., 1999):

- is a **feature** or **characteristic** considered significant in the user's perspective .
- is an **expected behaviour** of the system, which in practice is a service that should be available to a user.

Requirements

Types of Requirements (Bennet et al., 1999) :

- functional requirements
- non-functional requirements

Requirements

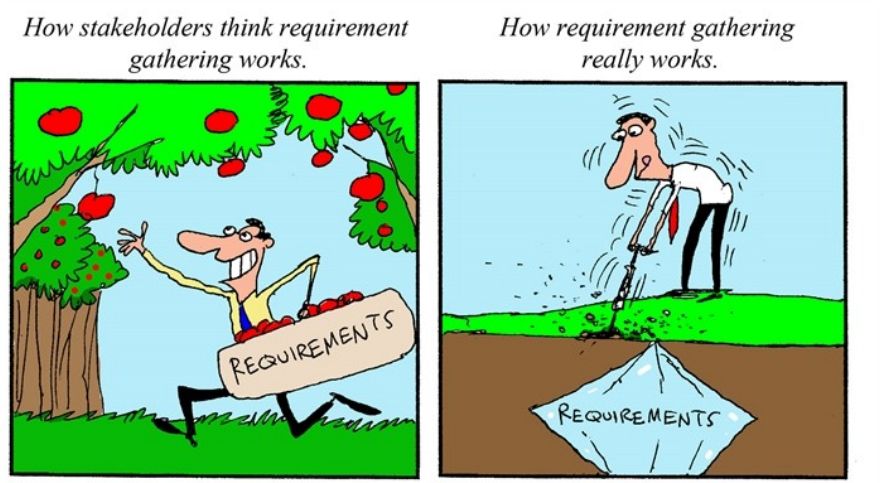
The requirements gathering consists of:

- Collect
- Capture
- Express
- Revise

Requirements

In order to make the requirements gathering can be used (Bennet et al., 1999) :

- document analysis
- interviews
- prototypes
- questionnaires
- engage user



Use Case Diagram

It is a way of documenting requirements:

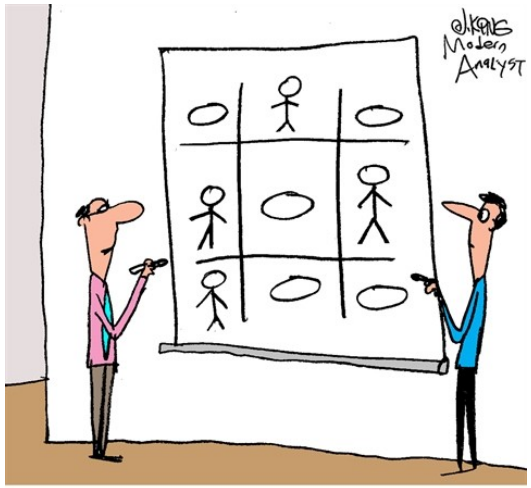
- It was developed by Jacobson (Jacobson et al., 1992) and was afterwards incorporated in the UML.
- Seeks to describe the requirements of a consistent and clear system.
- Seeks to ensure that both the client and the development team have a common view of the requirements.
- Describes possible real-world situations to test the system.

Use Case Diagram

- Use Case Diagram are used to show what features the system provides and what users communicate with the system when they access these features
- The use case model specifies what features the system provides in the perspective of users

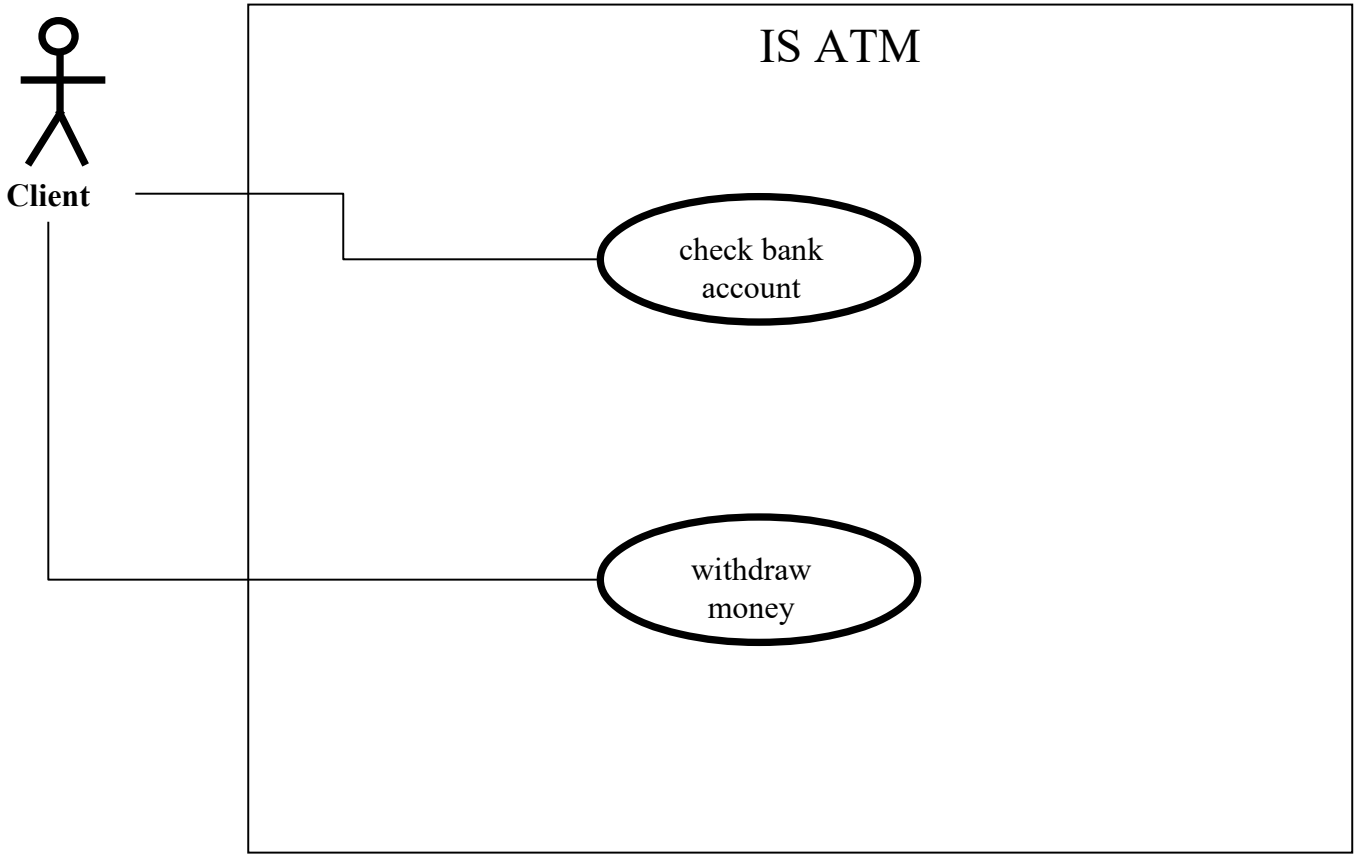
Use Case Diagram

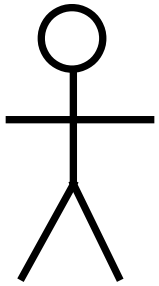
- System boundaries
- Actors
- Interaction or communication
- Use Cases - services available



Jerry and Bob, the new business analysts, decided to settle, once for all, whether use cases or actors are more important in the use case diagram.

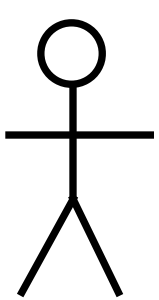
Use Case Diagram



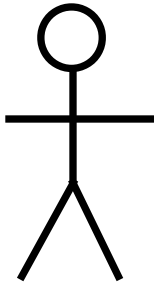


Actor

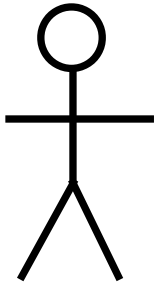
Actor is a coherent set of roles that the users play when interacting with these Use Case.



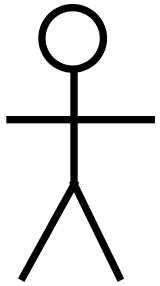
Client



Sales Clerk

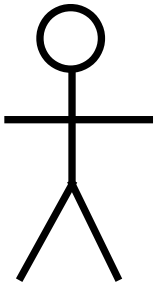


Pizzeria manager



Actor

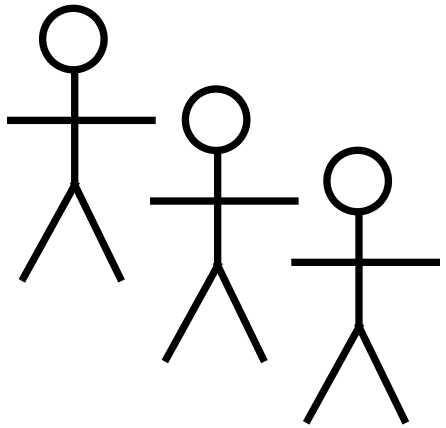
- Typically an actor represents a role played in the context of an Use Case
- An Actor may be :
  - human being;
  - device HW ;
  - another system



Actor

- An instance of an actor is an individual interaction with the system in a specific way.

- An user can play several roles corresponding to different actors.



Use Case

- use case is a **typical interaction** between a user and a computer system .
- An use case :
  - is a feature or characteristic considered significant in the user's perspective
  - can be small or large

Use Case

- How to build a use case ?
  - Through requirements gathering techniques
    - Performance of participatory meetings (workshops) ,
    - interviews,
    - questionnaires ,
    - direct observation ,
    - sample documents study

Use Case

- A set of sequences of actions (including variants) which realizes a system by providing an observable result and value for an actor (Booch et al . , 1999)
- Characteristics, an UC:
  - is often initiated by an actor
  - must be complete
  - must provide an answer with tangible value to an actor

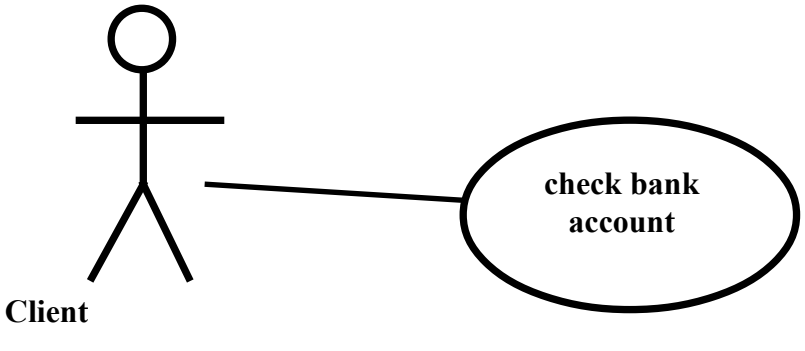
Use Case

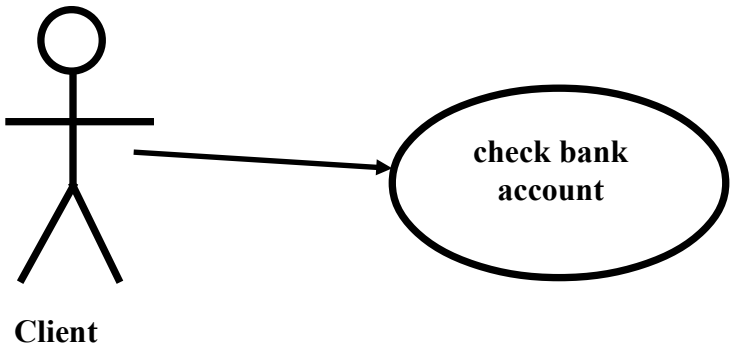
- Scenario
  - A scenario is a specific sequence of actions illustrating behaviours or interactions.
  - A use case is a set of scenarios.

Interactions or Communication

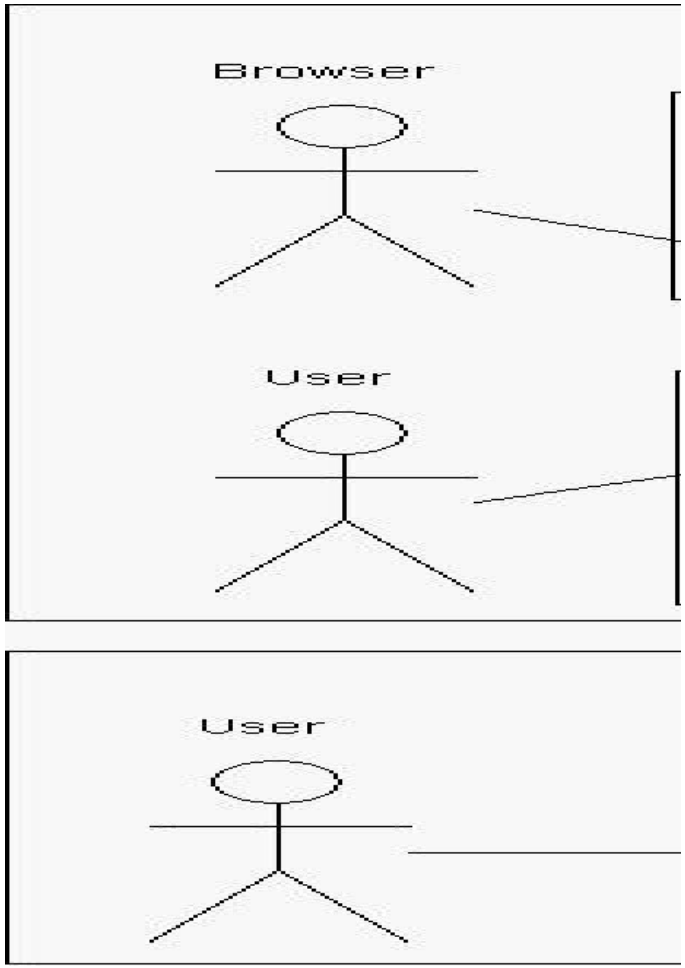
- An interaction is a behavior that comprises a set of messages exchanged between objects in a given context to achieving a purpose.
- An interaction is illustrated by one or more scenarios.

(Booch et al . , 1999)





Actor



Source: https://www.andrew.cmu.edu/course/90-754/umlucdfaq.html

Use Case Template

Title	
Preconditions	
Main Success Scenario	1. ... 2. ...
Extensions	
Postconditions	

Possible presentation styles:

informal text

numbered steps

Other techniques for describing the flow of events may be used:

Diagram Activities

Interaction Diagram

How to build a Use Cases model?

- Identify the scope of the system
- Identify actors
- For each actor identify Use Cases
- Draw the Use Case diagram
- Describe each Use Case

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Website

http://www.uml.org/

https://www.omg.org/