

fit@hcmus

# Software Testing

## CSC13003

### Use Case Testing



# What is Use case testing?

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Use case testing is a **black-box test design technique** in which test cases are designed to execute **use-case scenarios**

# Use case

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A list of **actions or event steps** defining interactions between an **actor** and a **system** to achieve a **goal**

# Use case

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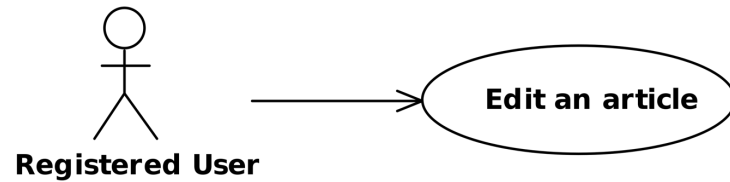
## Use case characteristics

- Only one goal
- A single starting point
- A single ending point
- Multiple paths for getting from start to finish

# Use case

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## Use case diagram



## Use case specification

- Description
- Preconditions
- Postconditions
- Flows of events
  - Basic flow
  - Alternate flows

# Use case

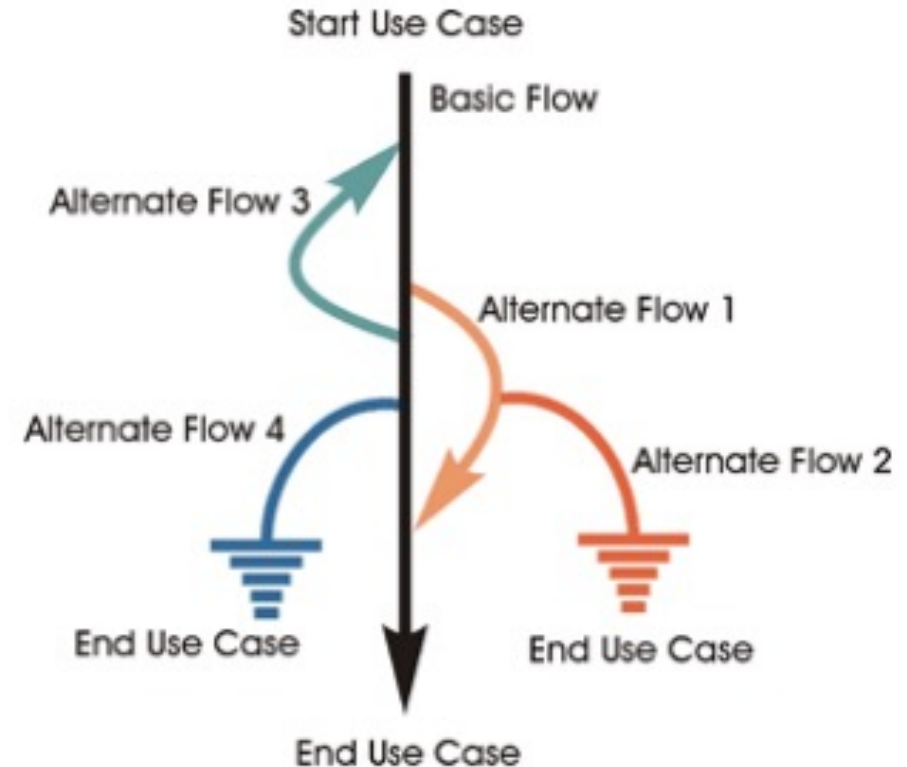
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## Basic flow

- Should cover what “normally” happens when the use case is performed

## Alternate flows

- Show covers behavior of an optional or exceptional character relative to normal behavior



# Use case

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For example: Login use case

Flow of event	Step	Description
Main flow	1	Enter username & password
	2	Validate password
	3	Allow account access
Alternate flows	2a	<u>Password not valid</u> Display message and ask for re-try 4 times
	2b	<u>Password not valid 4 times</u> Close application

# Use-case scenario

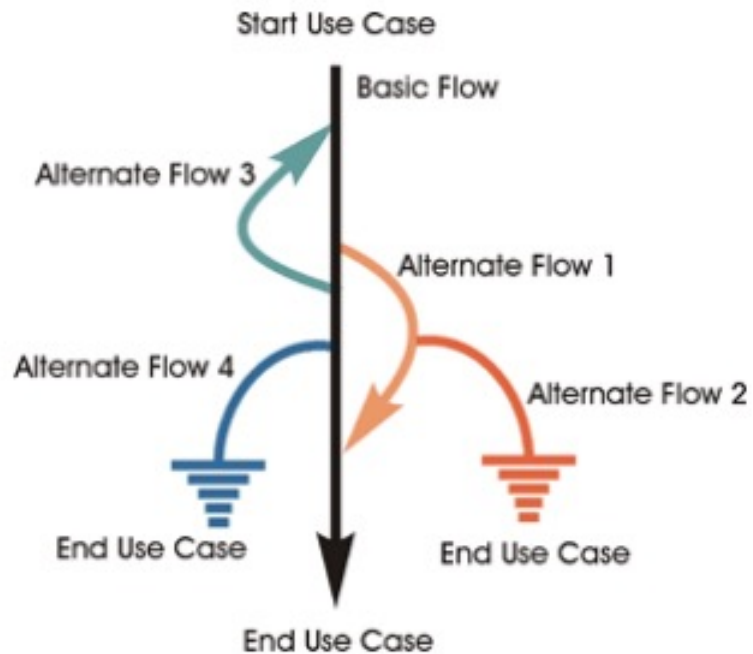
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- A complete “**path**” through the use case
- Beginning with the **basic flow**
- Combining the **basic flow** with **alternate flows**



# Use-case scenario

For example: Scenarios for the Use case



ID	Scenario
S1	Basic flow
S2	Basic flow + Alternate flow 1
S3	Basic flow + Alternate flow 1 + Alternate flow 2
S4	Basic flow + Alternate flow 3
S5	Basic flow + Alternate flow 3 + Alternate flow 1
S6	Basic flow + Alternate flow 3 + Alternate flow 1 + Alternate flow 2
S7	Basic flow + Alternate flow 3 + Alternate flow 4
S8	Basic flow + Alternate flow 4

