

Use Case Modeling

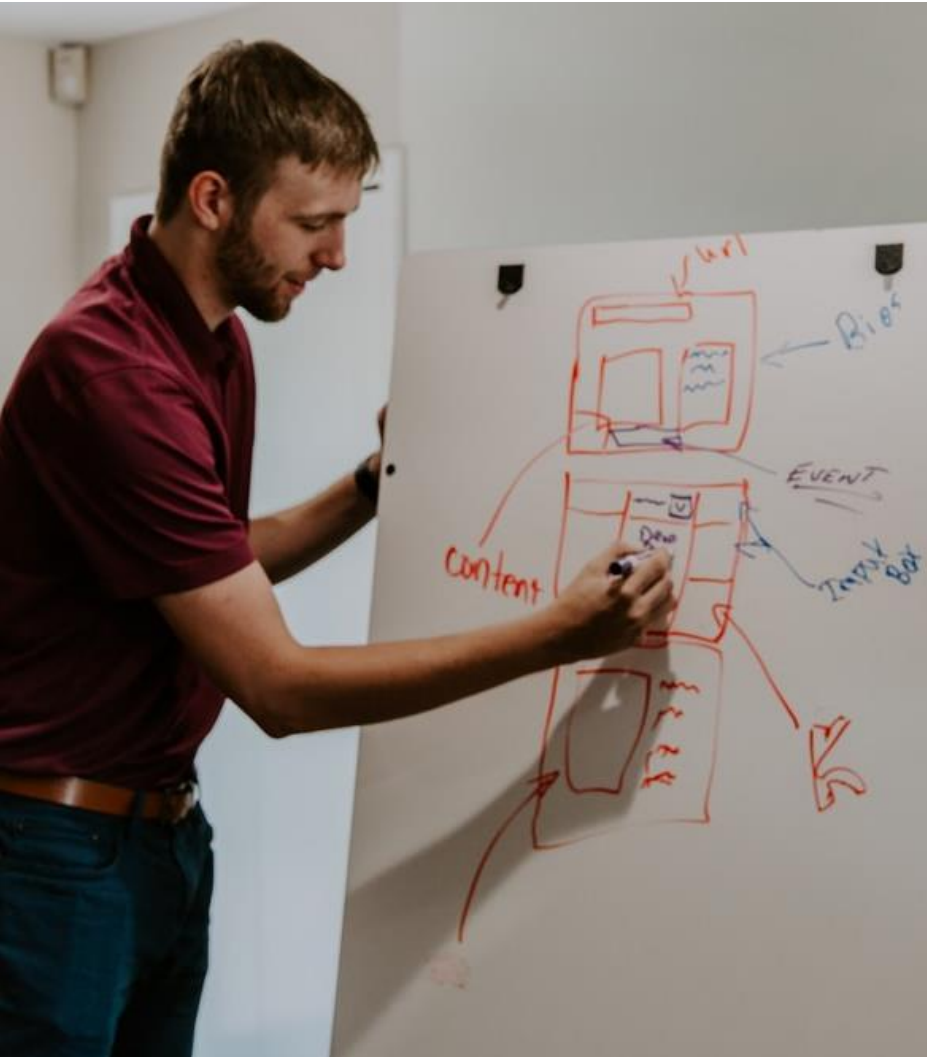
Tim Teaching ADBO

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Prodi D4 Teknik Informatika

Jurusan Teknologi Informasi

Intro



In OOAD, there are 2 types of model used to describe the functionality of a software, **Use Cases** and **Activity Diagrams**

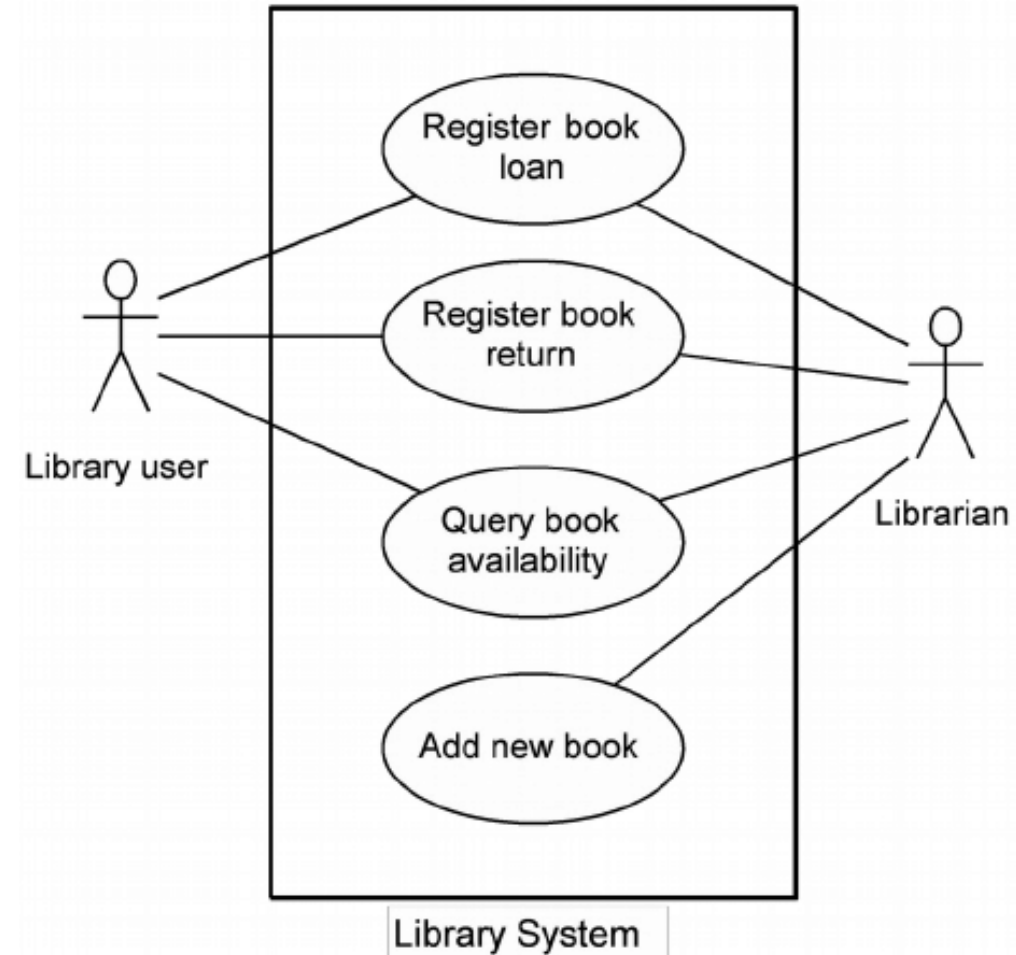
Use cases are used to defining the software **behavior**

What is Use Case?

- A formal way representing the way business system **interact** with its environment
- It illustrate the **activities performed by the user** of the system (software)

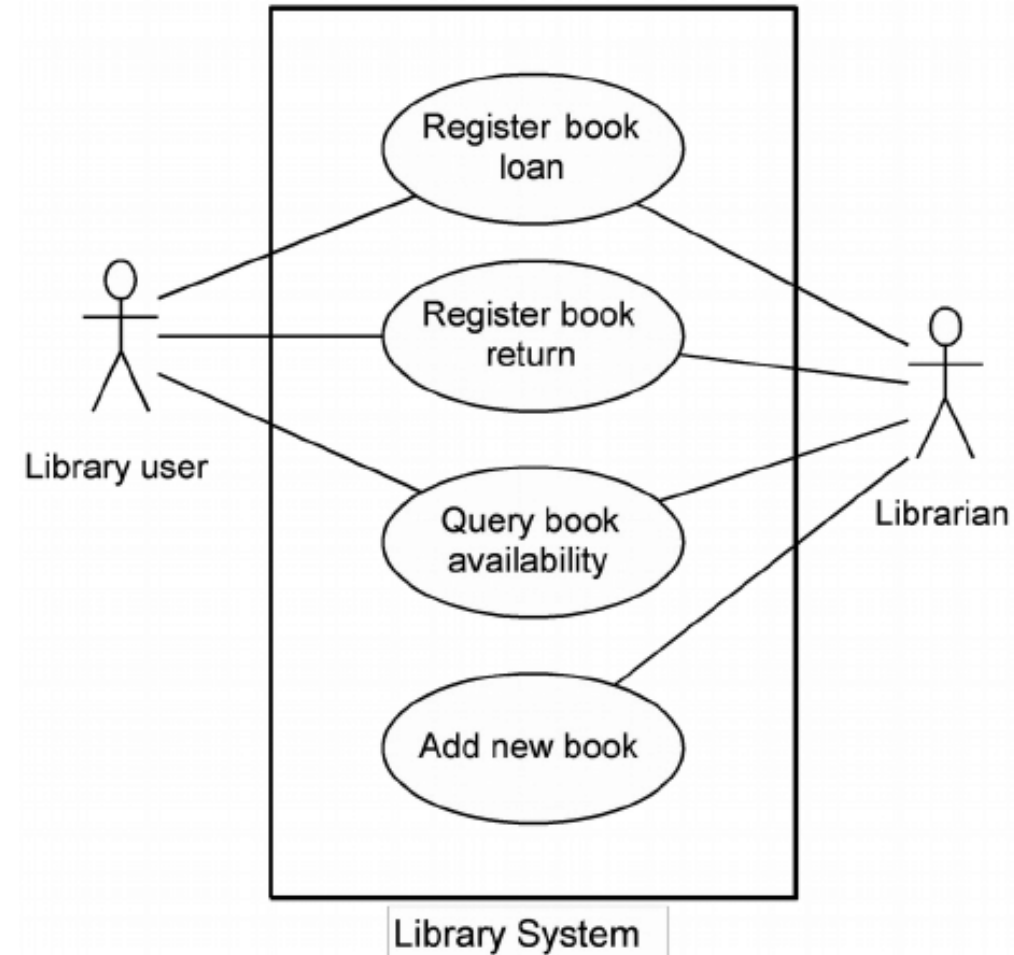
For examples:

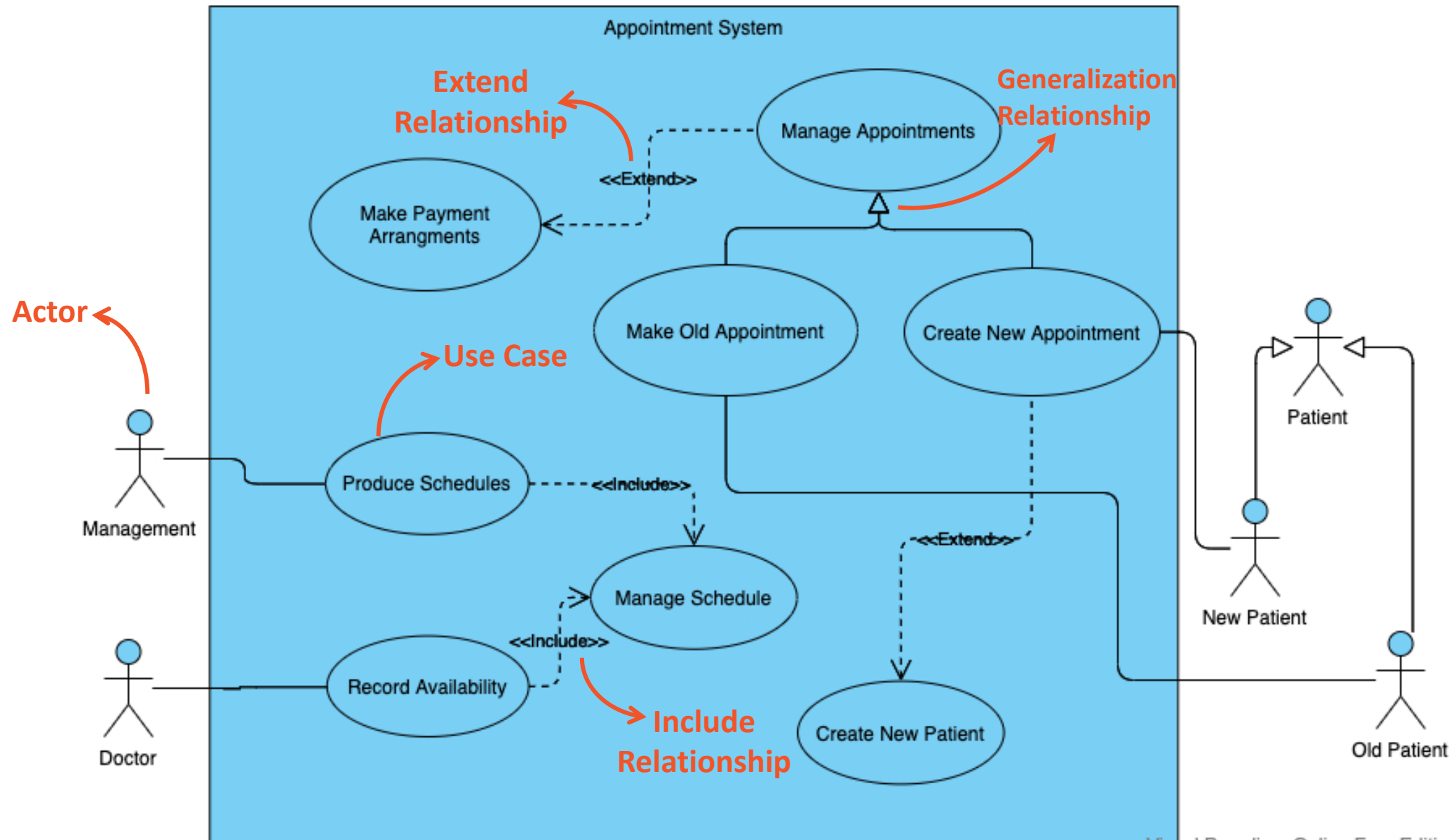
- Buy a book
- Create an account
- Post a book review
- Give a book rating
- etc



What is Use Case Diagram?

- A diagram which show **multiple use cases** on the one diagram
- It's showed an overview of a **related group** of use cases

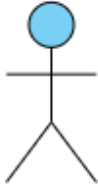

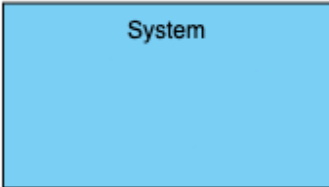




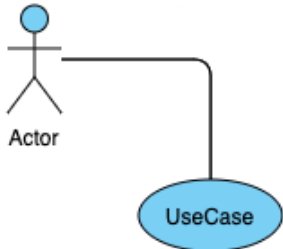
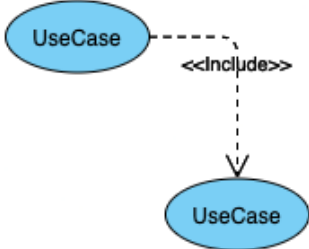
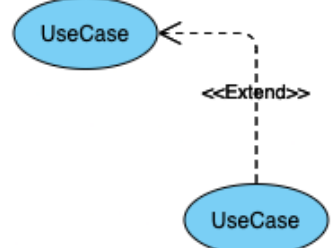
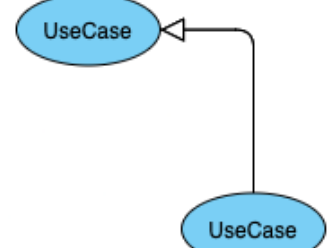
Use Case Anatomy (2)

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 <p>Actor</p>	<ul style="list-style-type: none">• Is a person or system that derives benefit from and is external subject• Is labeled with its role• Can be associated with other actors using specialisation/superclass association• Is placed outside the subject boundary
 <p>UseCase</p>	<ul style="list-style-type: none">• Represents a major piece of system functionality• Can extend another use case• Can include another use case• Is placed inside the system boundary• Is labeled with a descriptive verb-noun phrase
 <p>System</p>	<ul style="list-style-type: none">• Includes the name of the subject inside or on top• Represents the scope of the subject, e.g., a system or an individual business process

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	<ul style="list-style-type: none"> • Link an actor with the use case(s) with which it interacts
	<ul style="list-style-type: none"> • Represents the inclusion of functionality of one use case within another • Has an arrow drawn from the base use case to the used use case
	<ul style="list-style-type: none"> • Represents the extension of the use case to include optional behaviour • Has an arrow drawn from the extension use case to the base use case
	<ul style="list-style-type: none"> • Represent a specialised use case to a more generalised one • Has an arrow drawn from the specialised use case to the base use case

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Identify The Major Use Cases: The Best Practice



Tegarden, D., Dennis, A., & Wixom, B. (2013). *Systems analysis and design with UML*. Singapore: John Wiley & Sons.

The Guidelines: How to write Use Cases (1)

- Follow two paragraph rules
 - How user will be using the system and what system will do in response
 - What happens? (sunny days) -> Things that should be done in correct way
 - And then what happens? -> Keep asking until sunny days is completed
 - What else might be happen? -> If something wrong happen, what should we do?
- Write use cases in active voice
- Write use case using an event/response flow

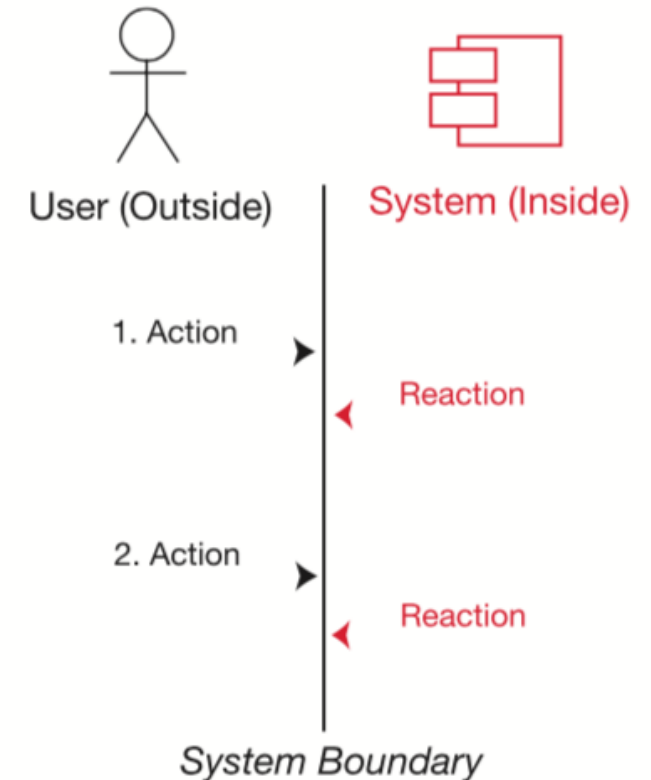
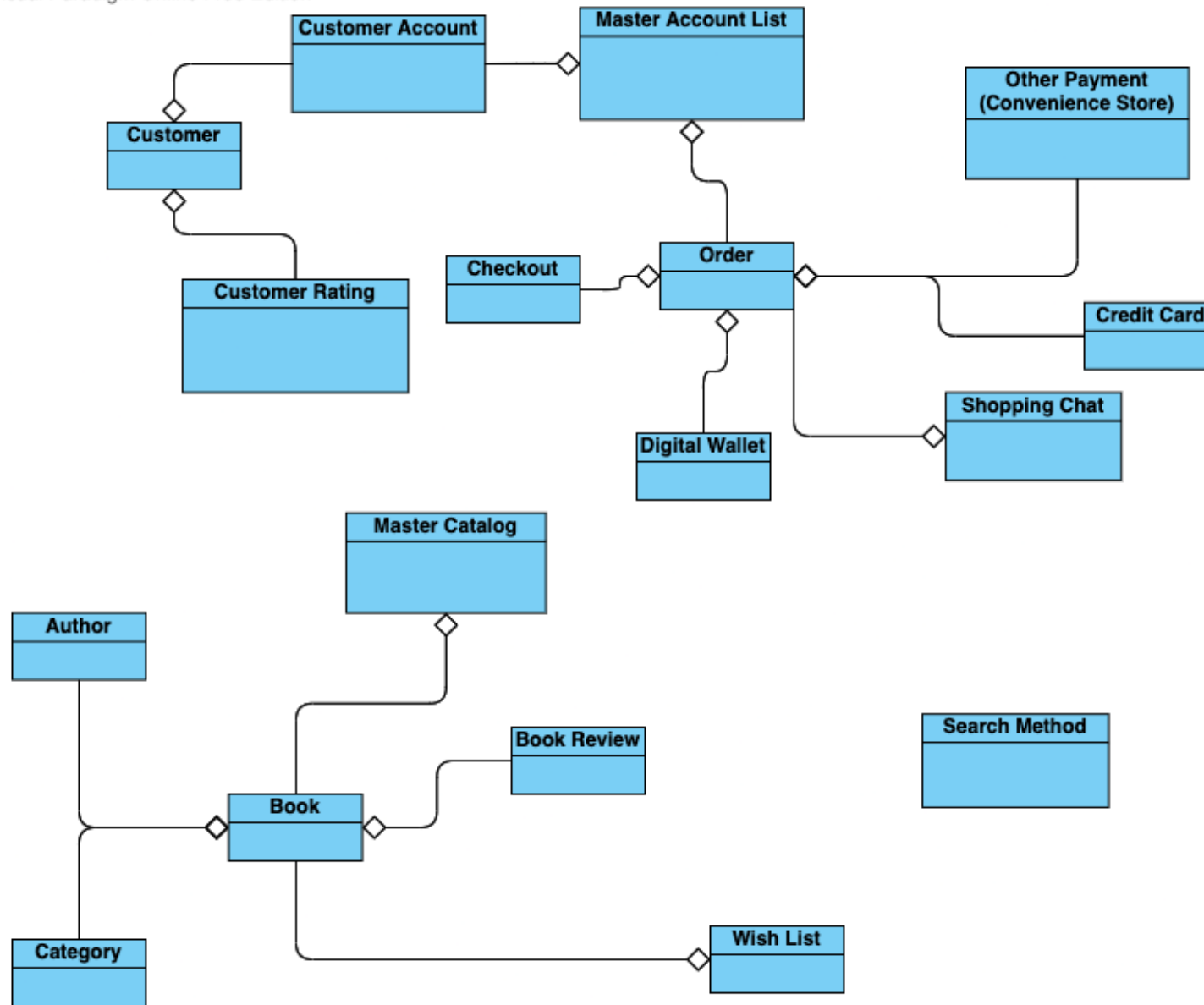


Figure 3-2. Anatomy of a use case scenario

The Guidelines: How to write Use Cases (2)

- Write your use case in the context of the object model
- Write your use cases using a noun-verb-noun sentence structure
 - The nouns are the object instances -> We can find it on our domain model
 - The verbs are the messages between the objects -> Represent the software function

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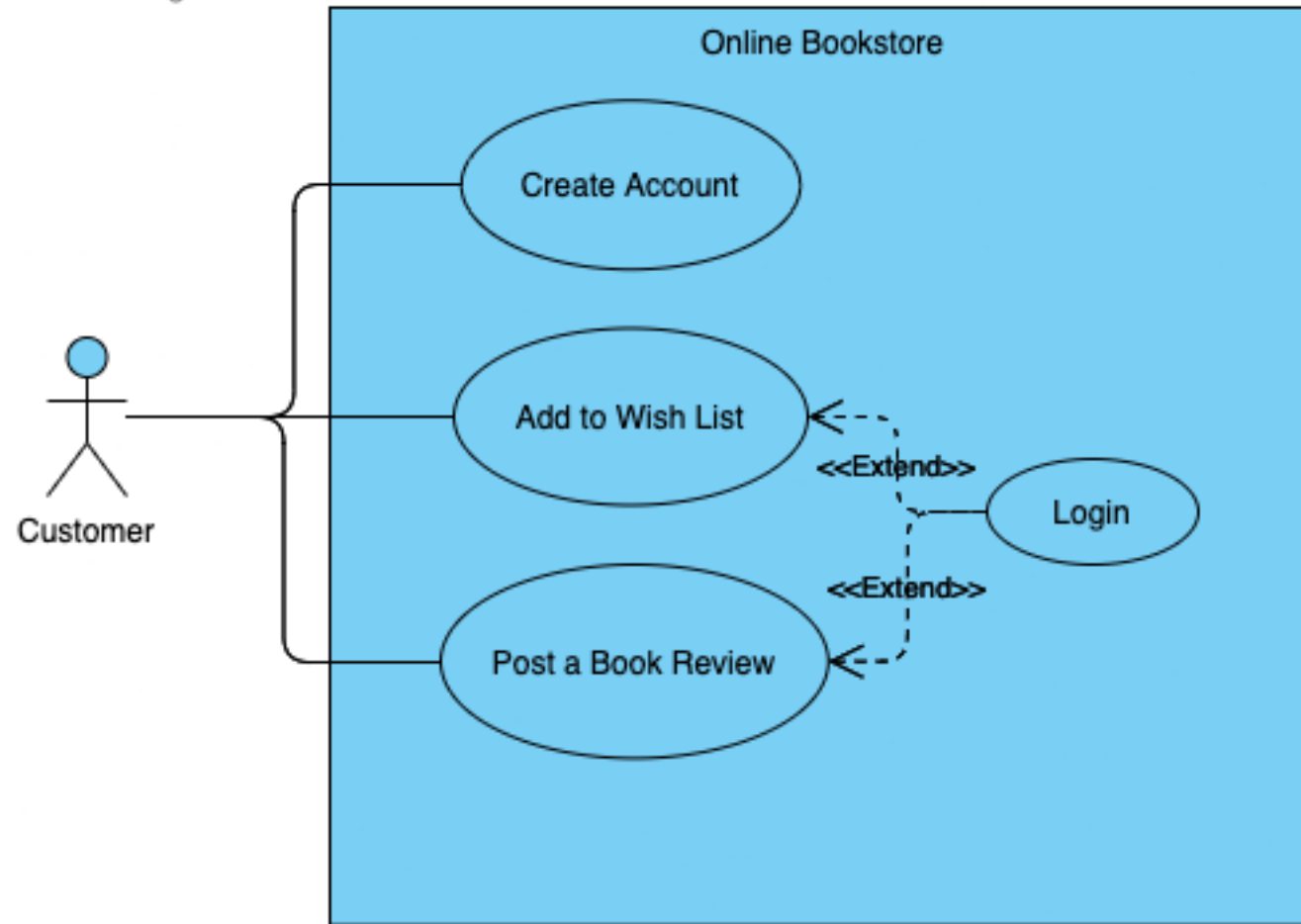


Online Bookstore: The Use Cases

- The **customer** enter id, name, address, email, and password, to **create** a **customer account** and then click create account button. The system looks up the **master account list**. If the customer doesn't exist, the system will add the **customer account** to **master account list**.
- The **customer** select a **book** and **adds** it to his **wish list**. The system display the updated wish list page and display the customer's **shopping chart**.
- The **customer** able to **post** a **book review**. The system will show the reviews on the book detail page.

INCORRECT : Online Bookstore: The Use Case Diagram

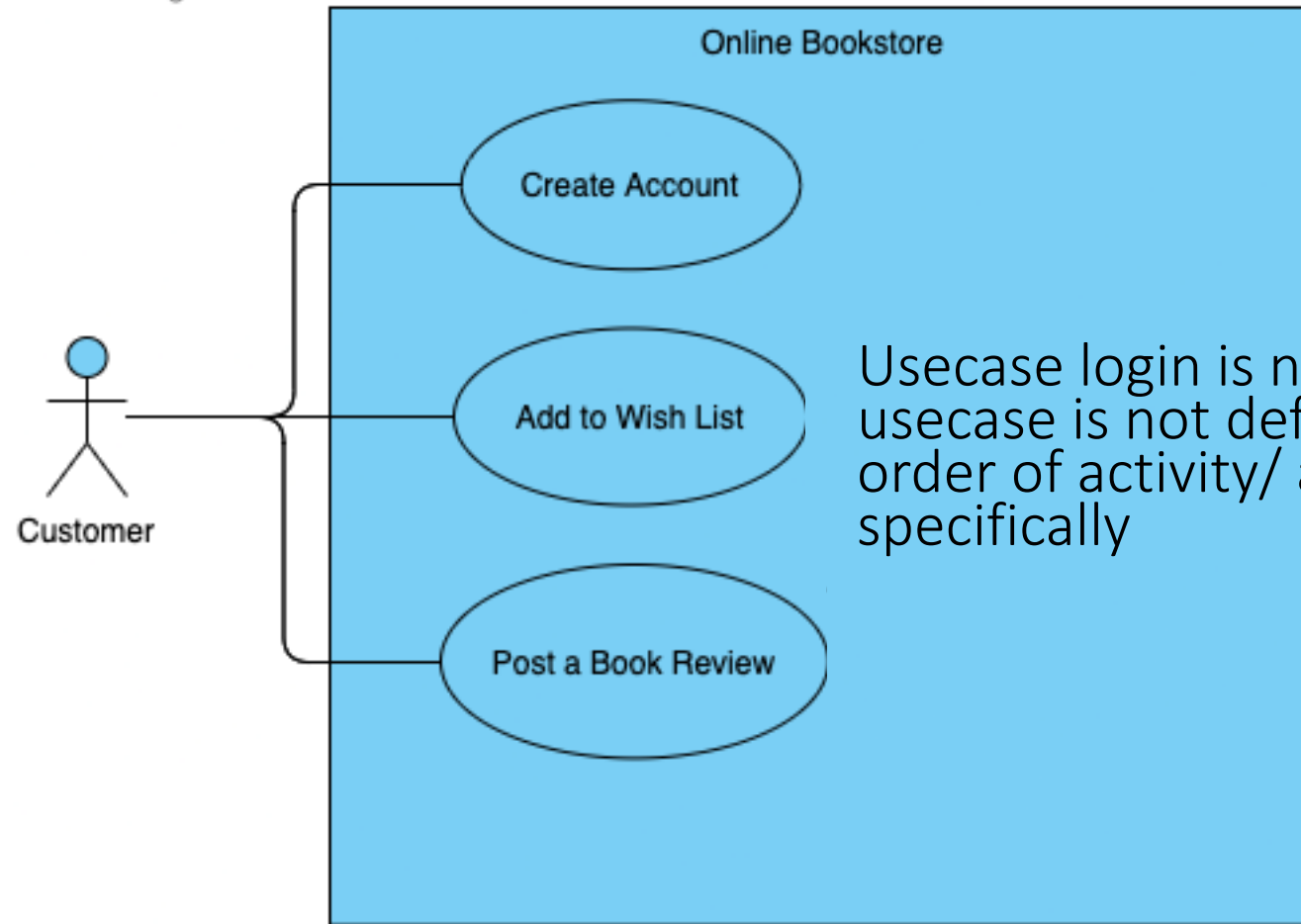
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CORRECT : Online Bookstore: The Use Case Diagram

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Usecase login is not needed.
usecase is not defining the
order of activity/ action
specifically

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Our use case is not complete

And not good enough. We should update it in the next several iteration.

Now your turn!

