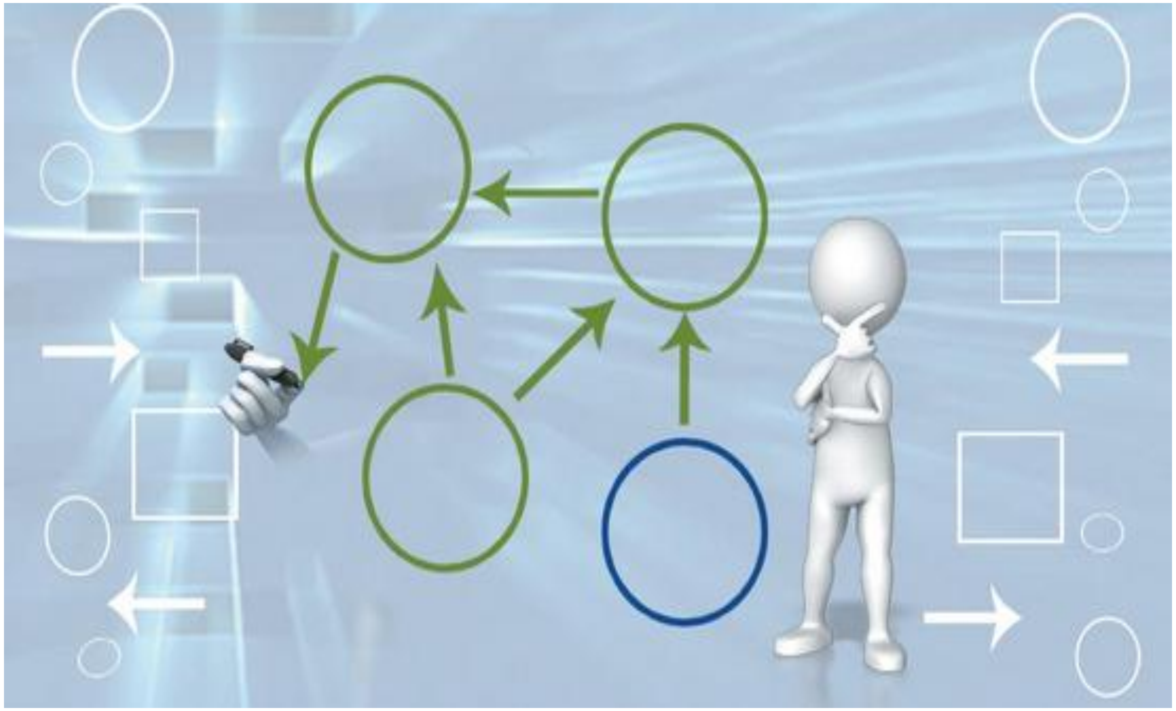
Topic: Use Case Diagrams

SILVER JUBILEE CELEBRATION 2016-2017
International University of Business Agriculture and Technology
IUBAT
1991 25 years 2016
1991-2016



Presented By –
M.M. Rakibul Hasan
Faculty, CSE, IUBAT University

Use Cases

What is a Use Case

- A formal way of representing how a system interacts with its environment
- Illustrates the activities that are performed by the users of the system
- Use case answer what will the system do?

3 Important parts in a use case

1. Actor
2. Use case
3. System Boundary
4. Relationship

Actors

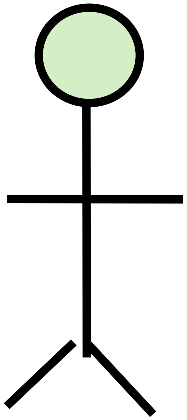
> An Actor is outside or external the system.

> End user.

> It can be a:

- Human
- Peripheral device (hardware)
- External system or subsystem
- Time or time-based event

Represented by stick figure



Primary and Secondary Actors

Primary Actor

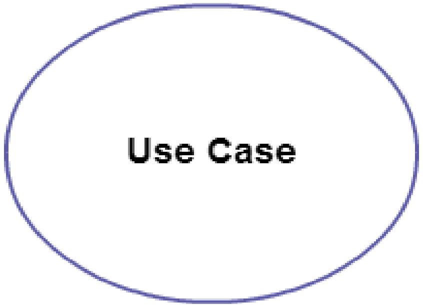
- Acts on the system
- Initiates an interaction with the system
- Uses the system to fulfill his/her goal
- Something we don’t have control over

Secondary Actor

- Is acted on/invoked/used by the system
- Helps the system to fulfills its goal
- Something the system uses to get its job done

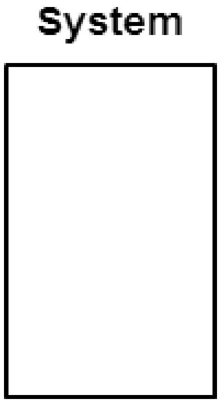
Use Case

A use case **represents a function or an action within the system**. Its drawn as an oval and named with the function.



System boundary

System is a sequence of events which happen when a user interacts with the system and drawn as a rectangle. This an optional element but useful when your visualizing large systems.

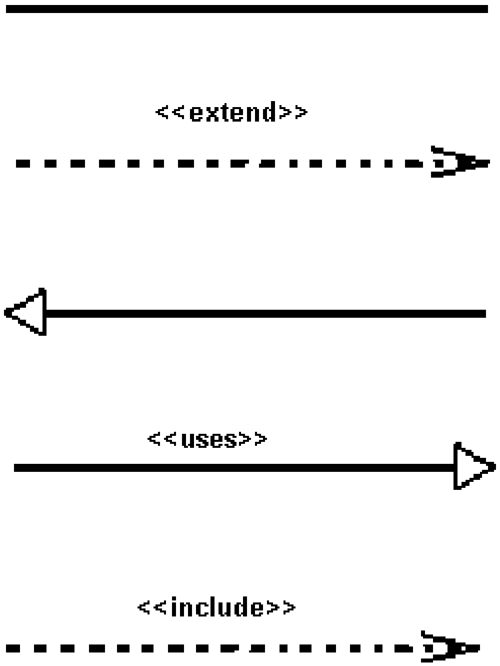


Relationship

Relationship is an association between use case and actor.

There are several Use Case relationships:

- Association
- Extend
- Generalization
- Uses
- Include



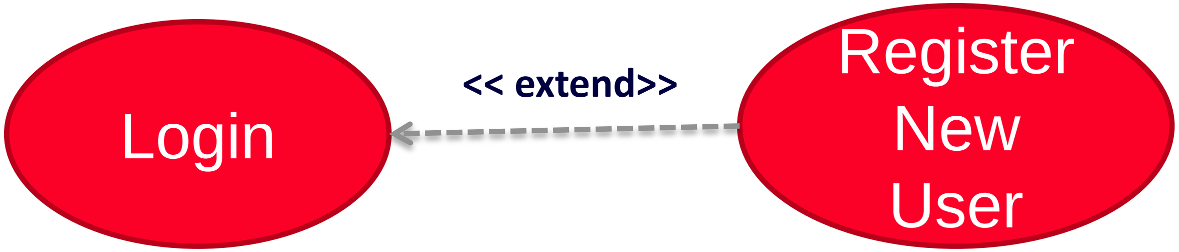
Extend Relationship

> The extended relationship is used to indicate that use case completely consists of the behavior of another use case at one or specific point

> use cases that extend the behavior of other core use cases. Enable to factor variants

> The base use case implicitly incorporates the behavior of another use case at certain points called extension points

> It is shown as a dotted line with an arrow point and labeled <<extend>>

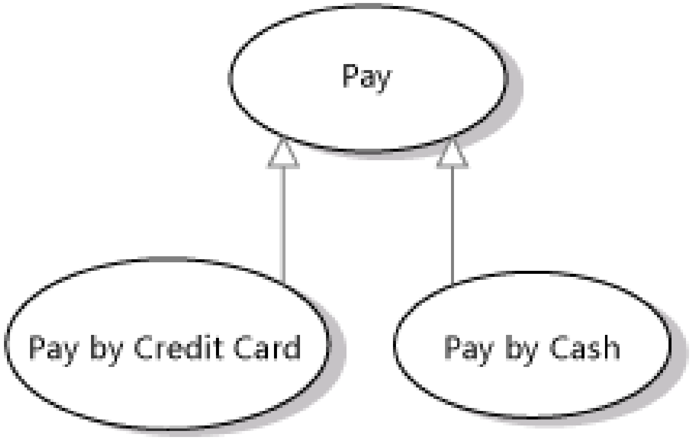


Generalization

Generalization is a relationship between a general use case and a more specific use case that inherits and extends features to it

use cases that are specialized versions of other use cases

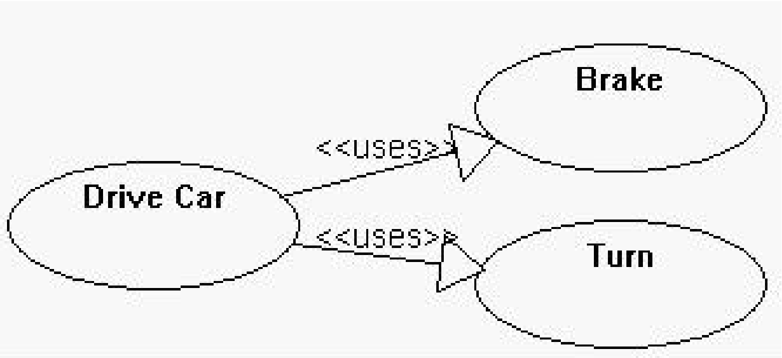
It is shown as a solid line with a hollow arrow point



Uses Relationship

When a use case uses another process, the relationship can be shown with the uses relationship

This is shown as a solid line with a hollow arrow point and the <<uses>> keyword



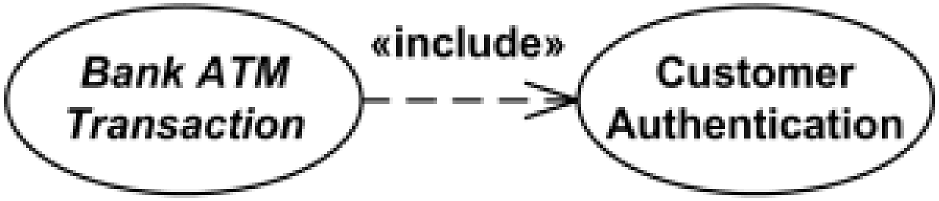
Include Relationship

Include relationships insert additional behavior into a base use case

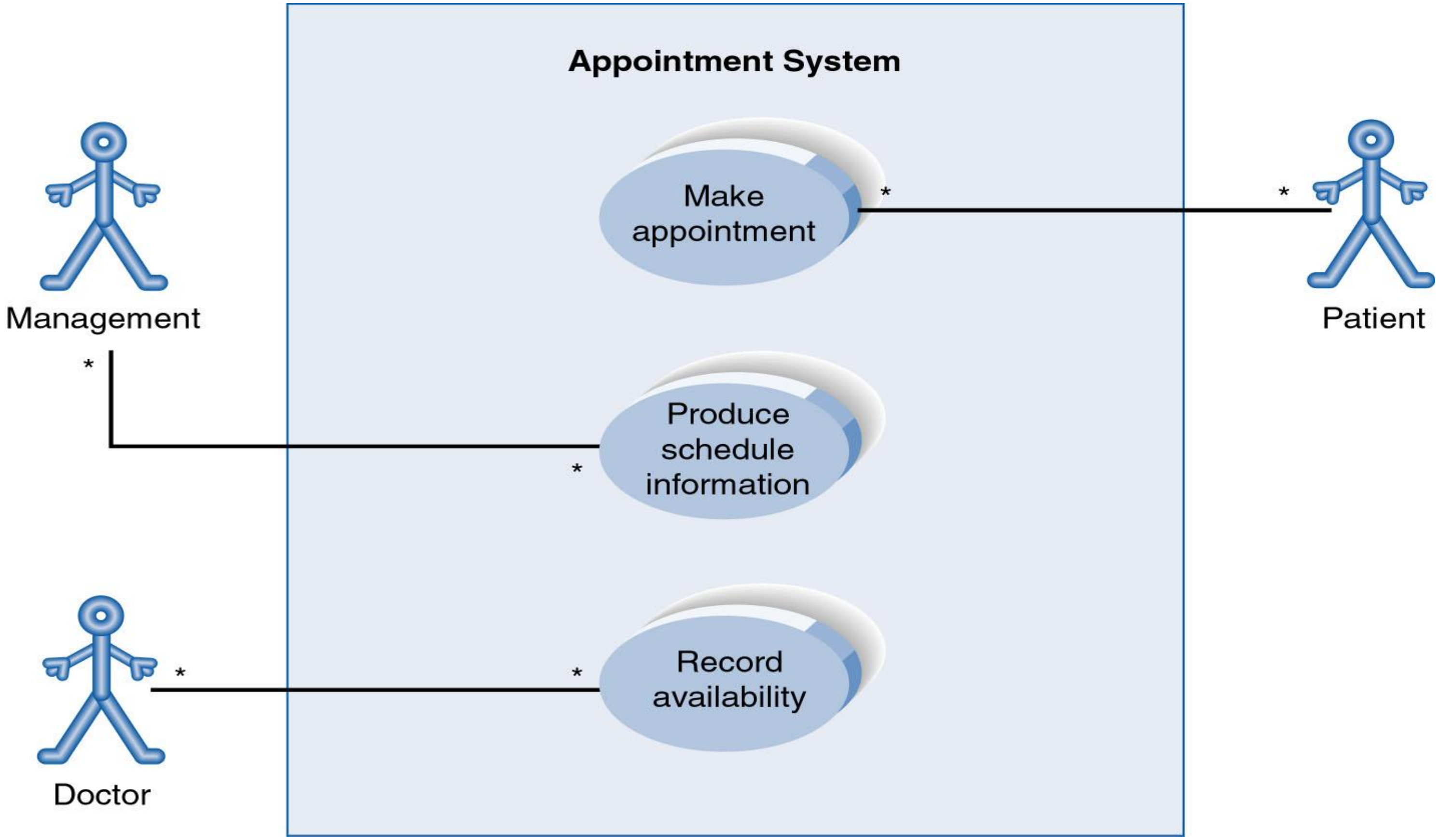
use cases that are included as parts of other use cases. Enable to factor common behavior.

The base use case explicitly incorporates the behavior of another use case at a location specified in the base.

They are shown as a dotted line with an open arrow and the key word <<include>>

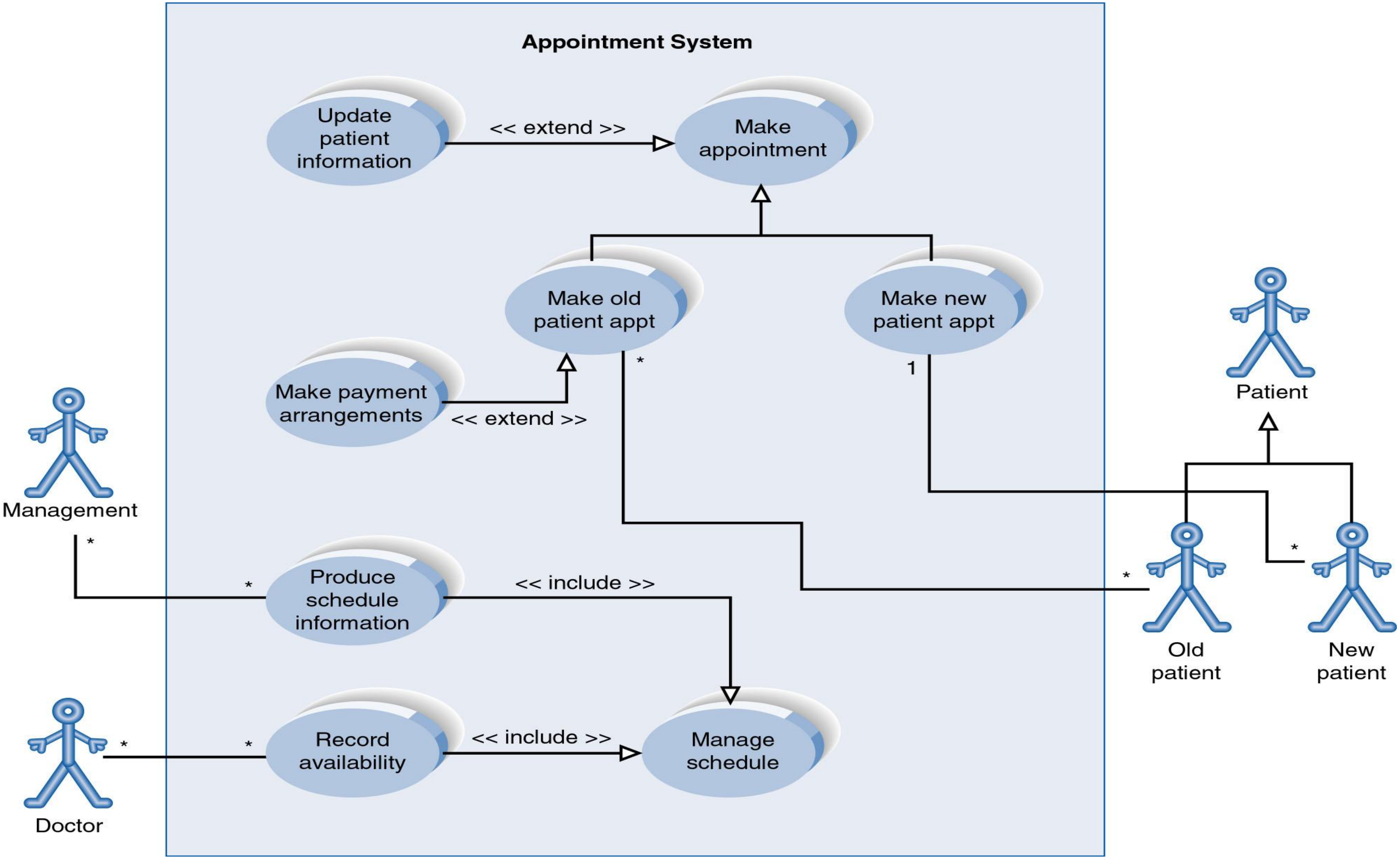


Use-Case Diagram



A use case diagram is a collection of actors, use cases, and their communications.

Example of Relationships



Thank You