TRINITY COLLEGE FOR WOMEN NAMAKKAL

Department of Computer Science

UNIFIED MODELING LANGUAGE(UML)

VI- Semester

Presented by

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Unified Modeling Language(UML)

➤UML is a standard language for specifying, visualizing, constructing, and documenting the artifacts of software systems.

➤UML was created by the Object Management Group (OMG) and UML 1.0 specification draft was proposed to the OMG in January 1997.

➤UML is different from the other common programming languages such as C++, Java, COBOL, etc.

➤UML is a pictorial language used to make software blueprints.

Components of Basic Model

There are various components of the basic model

➢ Actor

➢ Use Case

➢ Associations

Actor

Actors are people involved with the system defined on the basis of their roles.

An actor can be anything such as human or another external system.

Use Case

➤ The use case defines how actors use a system to accomplish a specific objective.

➤ The use cases are generally introduced by the user to meet the objectives of the activities and variants involved in the achievement of the goal.
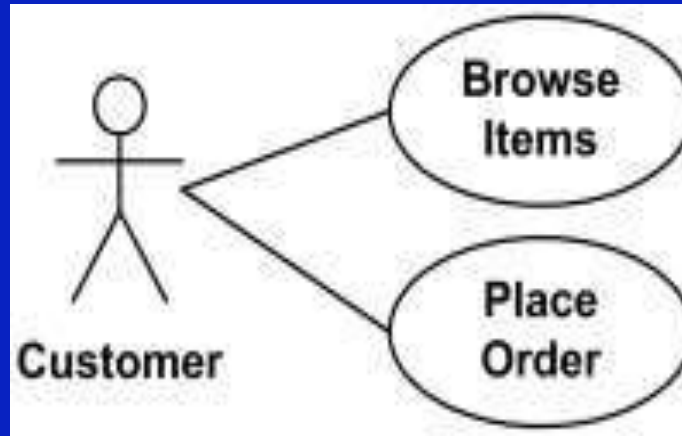
Associations

➤ Associations are another component of the basic model.

➤ It is used to define the associations among actors and use cases they contribute in.

➤ This association is called communicates-association.

Actor and Use Case

➢ Each **use case** represents a unit of useful functionality that **subjects** provide to **actors**.

➢ An **association** between an actor and a use case indicates that the actor and the use case somehow interact or communicate with each other.

➢Only **binary associations** are allowed between actors and use cases.

➢An actor could be associated to one or several use cases.

Actor and Use Case Example

**Customer actor is associated with two use cases -
Browse Items and Place Order.**

<u>One or Several Associated Actors</u>

If there are several actors associated to the same use case, it may not be obvious from use case diagram which actor **initiates** the use case, i.e. is a "**primary actor**".

(In non-standard UML, **primary actors** are those using system services, and **supporting actors** are actors providing services to the system.)

One or Several Associated Actors Example
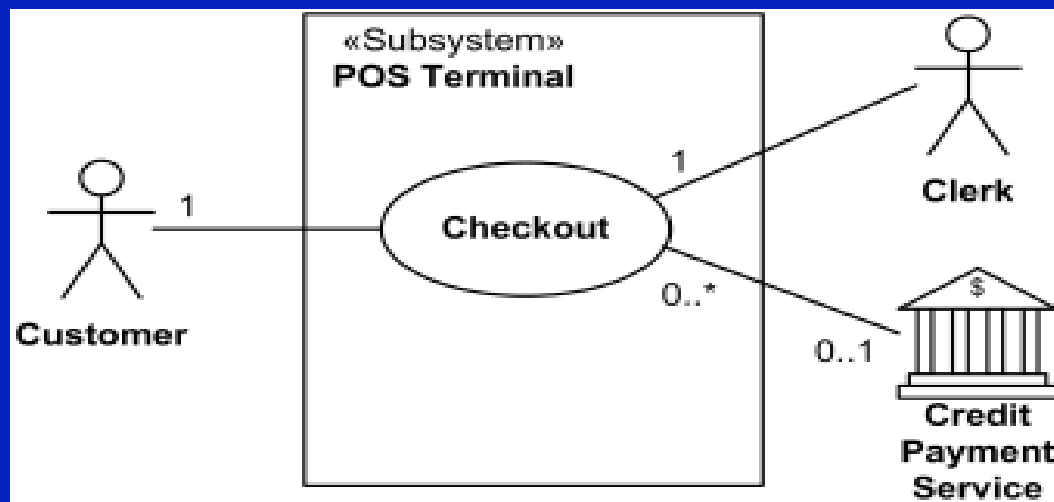
A use case may have one or several associated actors.

Manage Account use case is associated with Customer and Bank actors.

Multiplicity of a Use Case

➢   When an actor has an association to a **use case** with a **multiplicity** that is greater than one at the use case end.

➢   It means that a given actor can be involved in **multiple use cases** of that type.

THANK YOU

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