EXPERIMENT - 4

Software Engineering Lab

Aim

To perform the user's view analysis for the suggested system: Use case diagram.

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Aim:
To perform the user's view analysis for the suggested system: Use case diagram.

Theory:
The use-case diagram can provide the user's view for designing of the software product. And it can also be tested by matching up the requirements with the use-cases.

When to Use: Use Cases Diagrams

Use cases are used in almost every project. They are helpful in exposing requirements and planning the project. During the initial stage of a project most use cases should be defined, but as the project continues more might become visible.

Actors: Are NOT part of the system – they represent anyone or anything that must interact with the system.

- Only input information to the system.
- Only receive information from the system.
- Both input to and receive information from the system.
- Represented in UML as a stickman.

Use Case

- A sequence of transactions performed by a system that yields a measurable result of values for a particular actor.
- A use case typically represents a major piece of functionality that is complete from beginning to end. A use case must deliver something of value to an actor

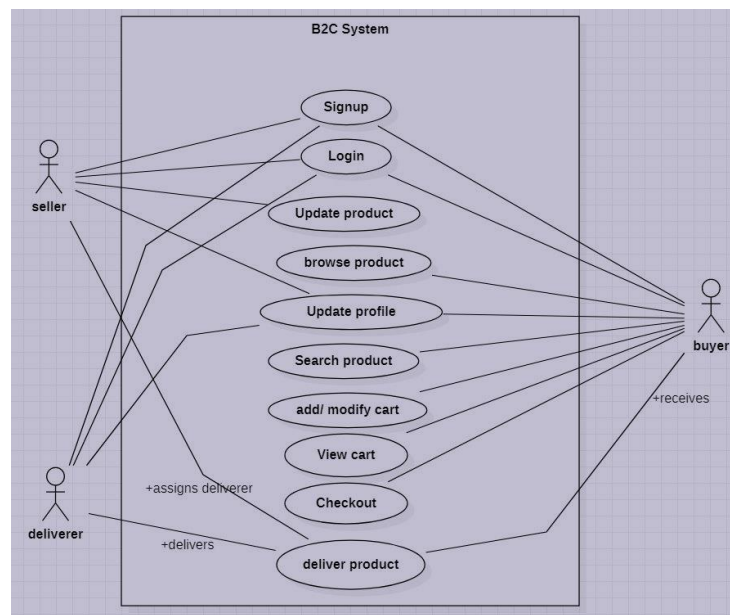**Use Case Relationships Between actor and use case.**

- Association / Communication.
- Arrow can be in either or both directions; arrow indicates who initiates communication.
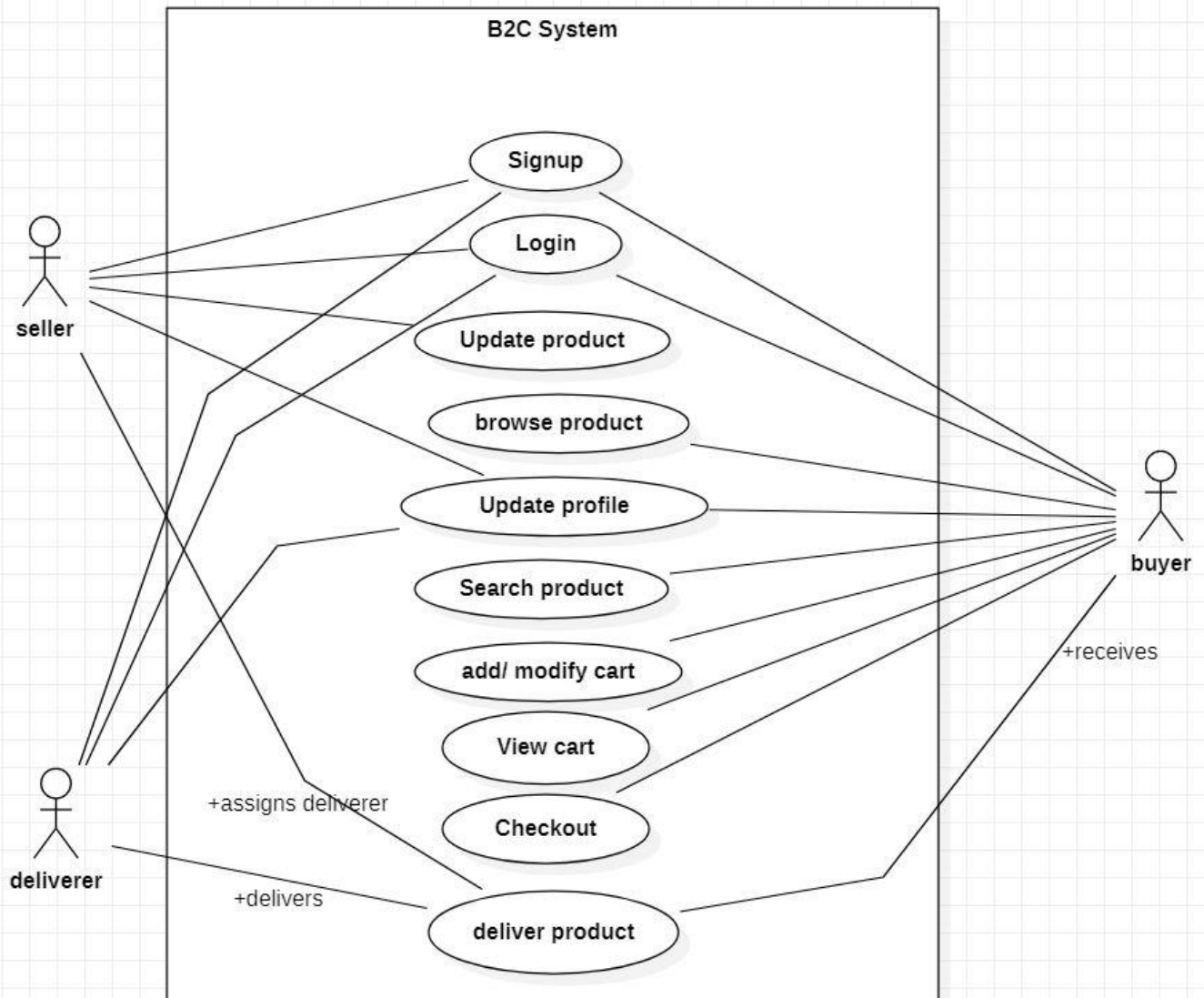
Between use cases (generalization):

Uses: Where multiple use cases share pieces of same functionality.

Performance Instruction:

1. Identify various processes, use-cases, actors etc. of the system and analyse it.

2. Use processes at various levels and draw use case diagram.

Output:

B2C System

Signup

Login

Update product

browse product

Update profile

Search product

add/ modify cart

View cart

Checkout

deliver product

seller

buyer

deliverer

+receives

+assigns deliverer

+delivers

Viva Questions

1. Explain use case approach of requirement elicitation?

Ans.

This technique combines text and pictures to provide a better understanding of the requirements. The use cases describe the 'what', of a system and not 'how'. Hence, they only give a functional view of the system. The components of the use case design include three major things – Actor, Use cases, use case diagram.

2. Explain term: use-case, use-case scenarios, use-case diagrams?

Ans.

A use case is a written description of how users will perform tasks on your website. It outlines, from a user's point of view, a system's behavior as it responds to a request.

A use case scenario is a single path through the use case. unlike a use case which is a step-by-step enumeration of the tasks carried out during a process (with the associated actors), a scenario is much more free-form.

A use case diagram can summarize the details of your system's users (also known as actors) and their interactions with the system.

3. What are actors and use cases?

Ans.

An **actor** in use case modelling specifies a role played by a user or any other system that interacts with the subject. An Actor models a type of role played by an entity that interacts with the subject (e.g., by exchanging signals and data), but which is external to the subject.

A **use case** is a written description of how users will perform tasks on your website. It outlines, from a user's point of view, a system's behaviour as it responds to a request.

4. Explain guidelines that should be kept in mind while creating use cases?

Ans.

Consider the following:

- Single statement per line

- Always have a subject – "User" or "System"

- Be concise – remember, use cases are not end requirements – you should be demonstrating the interaction between the system and user, but not detailed specifications

- Use an active voice

5. Name the person who invented use case approach?

Ans.

Ivar Jacobson first formulated textual and visual modelling techniques for specifying use cases.