<u>Answer</u>

   1.
Let's break down the Online Shopping System scenario step by step:

1. Actors/Users of the System:

Customer: A person using the system to purchase products or services.

Product/Service Provider: An entity or person uploading products/services to the system.

Authentication Service: External service that verifies users' credentials.

Credit Payment Service: External service that handles financial transactions.

2. Actions Performed by Each Actor:

Customer:

Register for an account (if new).

Log in to the system.

Browse and view products/services.

Select and check out products.

Make a transaction.

Product/Service Provider:

Upload and manage product/service details.

Authentication Service:

Authenticate customer login.

Authenticate transactions (before initiating a payment).

Credit Payment Service:

Handle the transaction process during checkout.

3. Dependencies Between Use Cases:

Login is a precondition for browsing/viewing products/services and making transactions.

Register and Login are mutually exclusive (i.e., the user must do one or the other but not both simultaneously). A new customer must register first, then log in.

Authentication is required before initiating a transaction, thus it is an include relationship for the transaction process.

Checkout includes Authentication and Payment use cases.

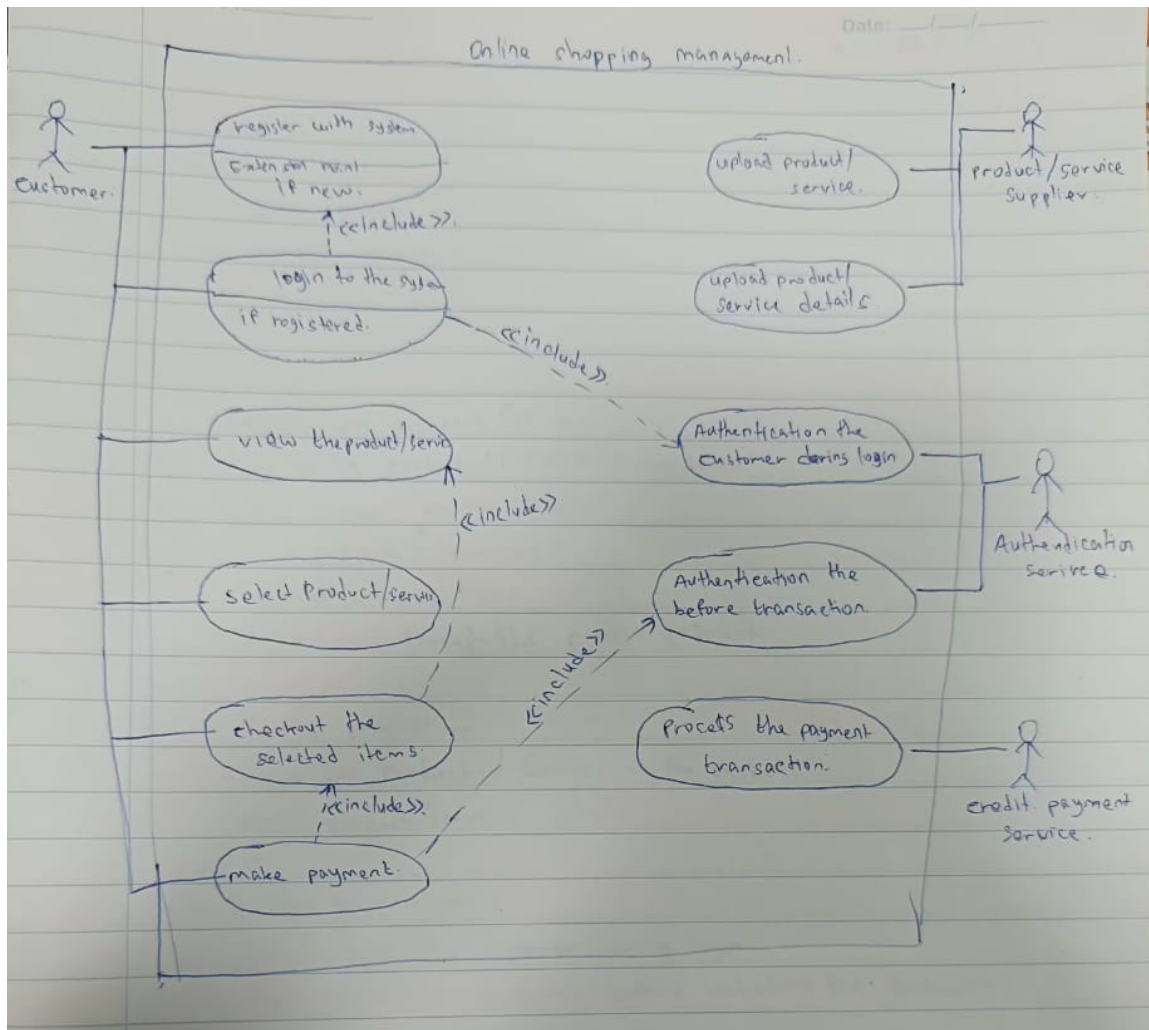Payment requires interaction with the Credit Payment Service, so it has an include dependency.
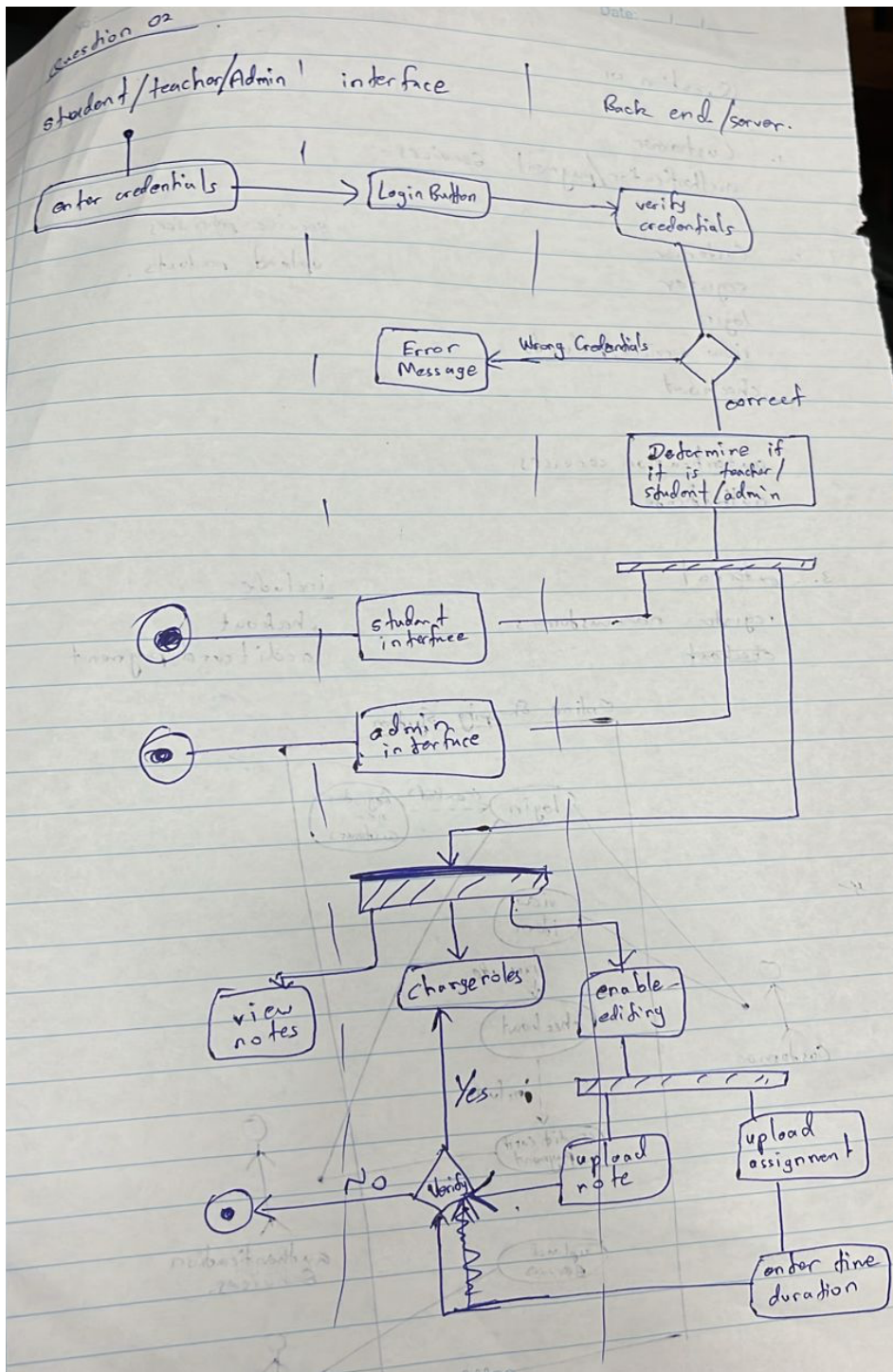

Types of Dependencies:

Include: The dependent use case is part of the base use case (e.g., Authentication is included in Checkout).

Extend: A use case can optionally extend the functionality of another, but none are specified explicitly in this scenario.

Generalization: There is no specific generalization scenario here.

Online shopping management.

Date: ___/___/___

Customer

- register with system
- Enter account if new.

«Include»

- login to the system if registered.

«include»

- view the product/service

«include»

- select product/service

- checkout the selected items

«includes»

- make payment.

Product/service Supplier

- upload product/service.

- upload product/service details

- Authentication the customer during login

Authentication Service.

- Authentication the before transaction.

«include»

- Process the payment transaction.

credit payment service.

Question 02

student/teacher/Admin interface   Back end/server.

enter credentials → Login Button → verify credentials

Error Message ← Wrong Credentials ◇ correct

Determine if it is teacher/student/admin

student interface

admin interface

view notes   Change roles   enable editing

Yes   upload note   upload assignment

No   Verify   enter time duration

2.