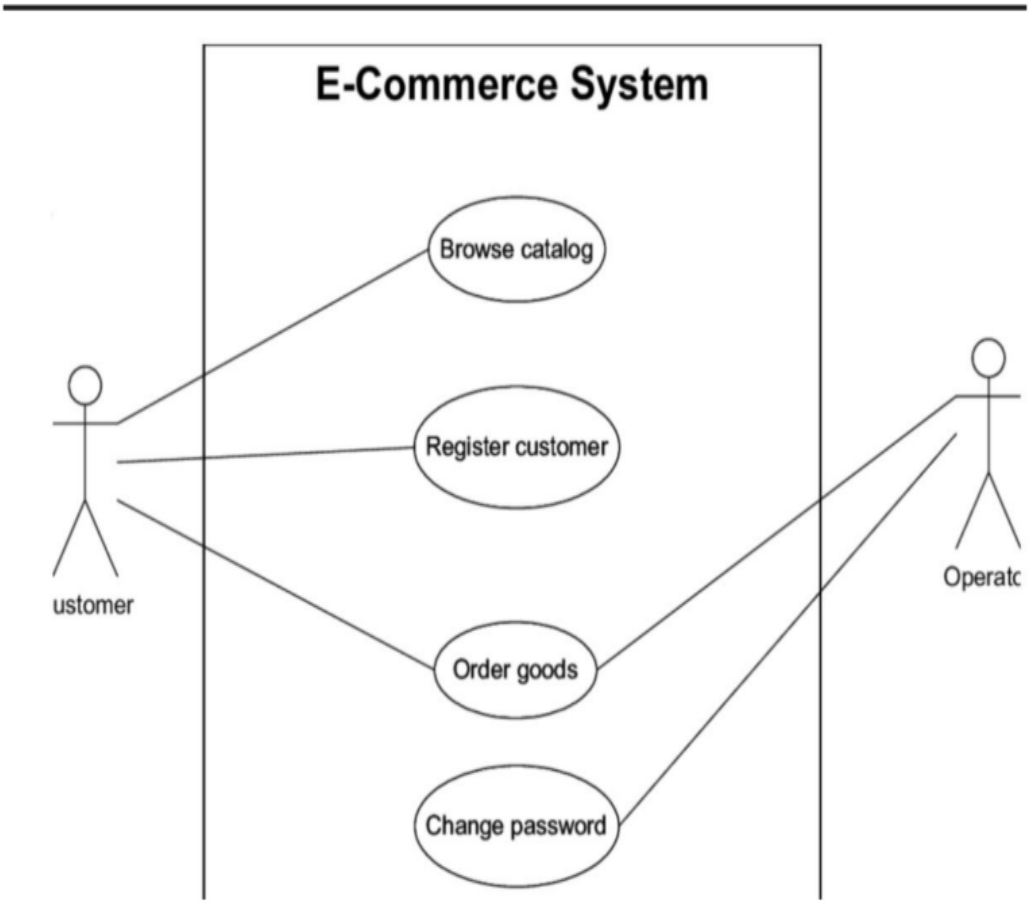
4)**AMAZON**


E-Commerce System
Browse catalog
Register customer
Order goods
Change password
ustomer
Operatc

Use case name:	Browse Catalogue
Goal:	To explore the lists of goods available from the system.
Actor(s):	Customer
Preconditions:	The customer has access to the internet.
Main flow of events:	1. The customer enters the e-commerce website. 2. The customer selects the Browse Catalogue section. 3. The system displays lists of products to the customer. 4. The customer browses the catalogue for a particular product. 5. The customer finds the product.
Alternate flows:	User cannot find product he/she wanted. Use case ends.
Post conditions:	The product is found.

Use case name:	Register customer
Goal:	To register a customer identity with the system.
Actor(s):	Customer
Preconditions:	The customer has access to the website. The customer has not registered before.
Main flow of events:	1. The customer enters the Register Customer section. 2. The system displays the new customer registration form. 3. The customer provides registration details. 4. The customer submits the registration form. 5. The system updates its registration data information.
Alternate flows:	The customer has already registered. Use case ends.
Post conditions:	The customer is registered and the details are saved to a databa

Use case name:	Order goods
Goal:	To order goods from the system.
Actor(s):	Customer Operator
Preconditions:	The customer is registered to order goods. The customer has entered registration details e.g. user name and password (the customer is logged on to the ordering section).
Main flow of events:	1. The customer enters Order Goods section. 2. The system displays the customer's account detail. 3. For each product that the customer wishes to order, the customer enters its identity. 4. The customer provides delivery details. 5. The system calculates and displays the price of the goods ordered. 6. The customer submits payment details. 7. The system confirms the result of transaction. 8. The operator collects the detail of the order. 9. The operator processes the order.
Alternate flows:	
Post conditions:	The order and its detail are entered on the system and the order is processed.

Use case name:	Change Password
Goal:	Change the password for the login
Actor(s):	Operator
Preconditions:	The operator is logged in.
Main flow of events:	1. The operator enters his/her current password 2. The system validates the password. 3. The operator enters a new password, twice, as prompted by the system. 4. The operator confirms the change. 5. The system saves the new password.
Alternate flows:	A1. If the operator's old password is incorrect, an error message should be displayed and the password should not be changed. A2. If the two entries of the new passwords do not match, the operator is prompted to re-enter them.
Post conditions:	The password of the operator is changed and updated in the database.

7. List and explain the principles of Agile methods. Give its applicability and problems involved.

Ans:

The principles of agile methods

Principle	Description
Customer involvement	Customers should be closely involved throughout the development process. Their role is provide and prioritize new system requirements and to evaluate the iterations of the system.
Incremental delivery	The software is developed in increments with the customer specifying the requirements to be included in each increment.
People not process	The skills of the development team should be recognized and exploited. Team members should be left to develop their own ways of working without prescriptive processes.
Embrace change	Expect the system requirements to change and so design the system to accommodate these changes.
Maintain simplicity	Focus on simplicity in both the software being developed and in the development process. Wherever possible, actively work to eliminate complexity from the system.

Agile method applicability

- Product development where a software company is developing a small or medium-sized product for sale.
- Custom system development within an organization, where there is a clear commitment from the customer to become involved in the development process and where there are not a lot of external rules and regulations that affect the software.
- Because of their focus on small, tightly-integrated teams, there are problems in scaling agile methods to large systems.

①

(i) Define Project Planning.

→ Project Planning involves breaking down the work into parts and assign these to project team members, anticipate problems that might arise and prepare tentative solution to those problems

(ii) Define Refactoring

Refactoring is defined as systematic process of improving existing computer code without adding new functionality or changing external behaviour of the code

(iii) Define System modelling

→ System modeling is the process of developing abstract models of a system, with each model presenting a different view or perspective of that system.

(iv) Define UML [Unified Modeling language]

UML is a general-purpose modeling language. The main aim of UML is to define a standard to visualize the way a system has been designed

(v)

↪ Effort = $A \times Size^B \times M$.

A → organisation-dependent constant

B → disproportionate effort for large project

M → multiplier reflecting product, process & people

size → It may be code size or function points.

System perspectives

- An external perspective, where you model the context or environment of the system.
- An interaction perspective, where you model the interactions between a system and its environment, or between the components of a system.
- A structural perspective, where you model the organization of a system or the structure of the data that is processed by the system.
- A behavioral perspective, where you model the dynamic behavior of the system and how it responds to events.

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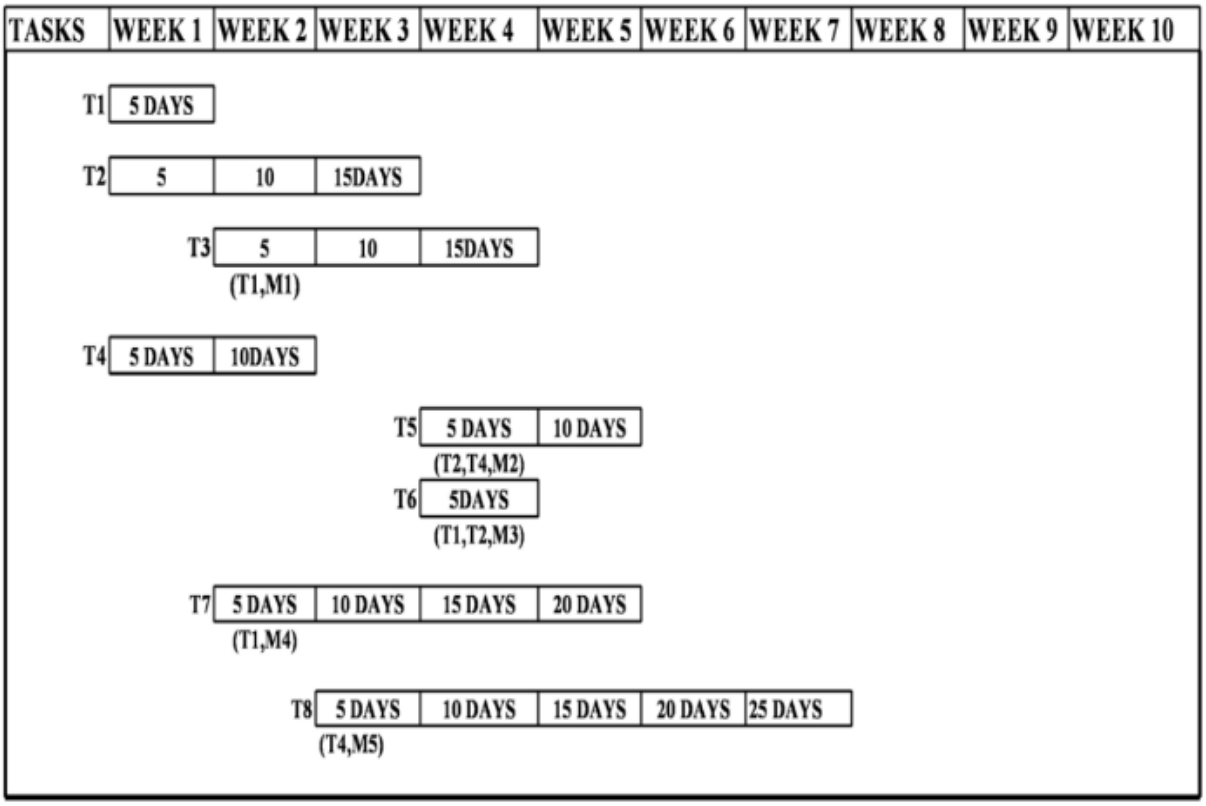
TASKS
WEEK 1
WEEK 2
WEEK 3
WEEK 4
WEEK 5
WEEK 6
WEEK 7
WEEK 8
WEEK 9
WEEK 10
T1
5 DAYS
T2
5
10
15DAYS
T3
5
10
15DAYS
(T1,M1)
T4
5 DAYS
10DAYS
T5
5 DAYS
10 DAYS
(T2,T4,M2)
T6
5DAYS
(T1,T2,M3)
T7
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15 DAYS
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T8
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20 DAYS
25 DAYS
(T4,M5)