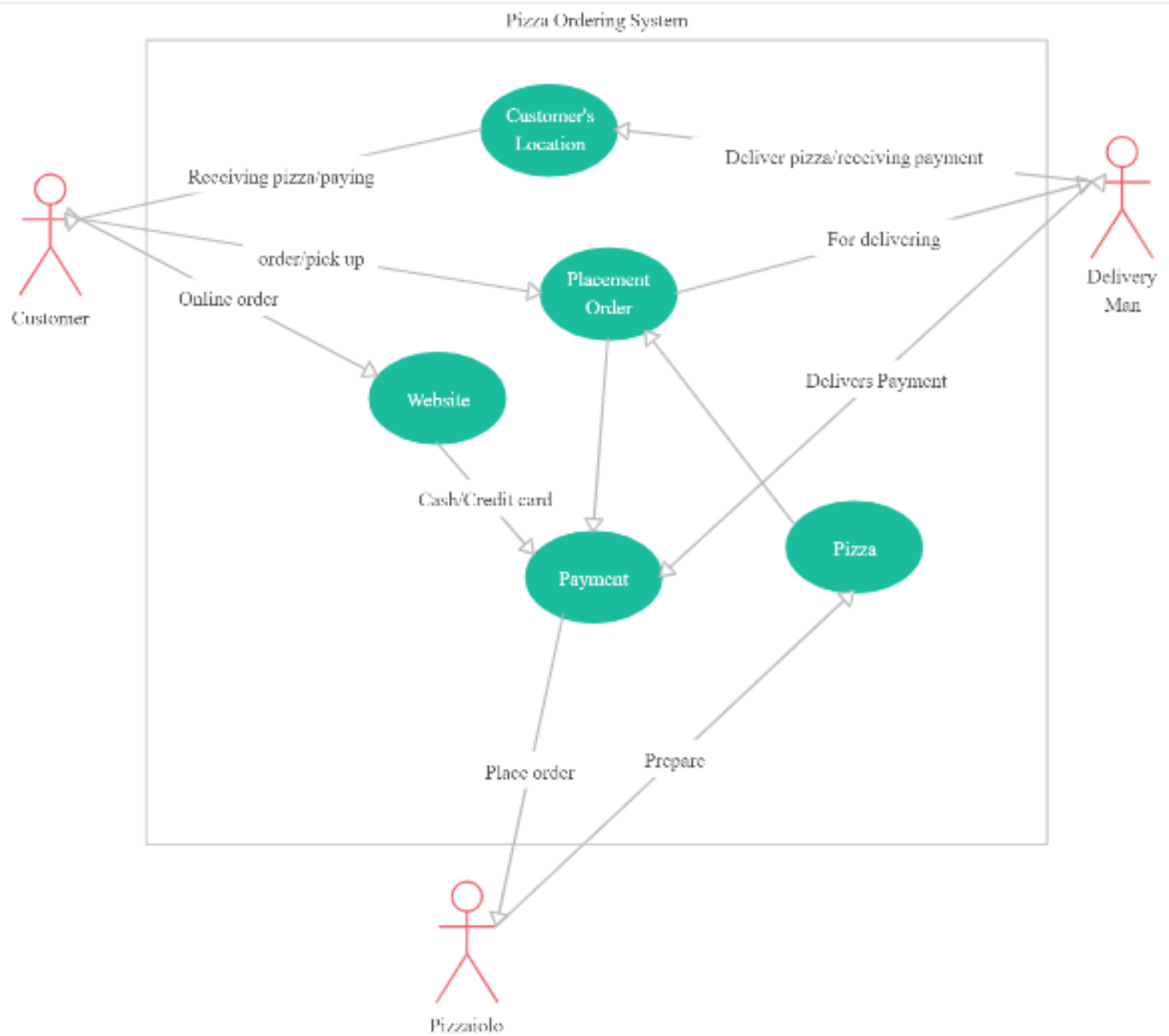


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I.D = 14713
B.S SOFTWARE ENGINEERING
SECTION=B
MODULE=4TH
EXAM=MID

Question No 1:

Using Case Diagram:

Pizza Ordering System:



Question No 2:

While drawing up a system requirement specifications, an engineer might keep track of functional and non-functional requirements by ensuring the following:

The requirement needed to design meets the requirements such as compatibility, probability etc.

Design the system so that it ensures safety and security.

Implementing the system in an efficient manner.

The cost and time require for the development should not affect the design and implementation of the system.

Here the non-functional requirements define what are the expectation to get out and the user requirements.

The functional requirement define the use of the developer knowledge.

It does not conflict with each other. The first step is to make the system requirement document.

It is engineer's responsibility to prepare documents to each functional and non-functional requirement.

The engineer need to prepare document depending on this; Non-functional requirement need the natural language and functional requirement need the structured language to understand better.

It gives the matrix that shows each requirement related to each other.

It is very difficult to manage because the functional and non-functional requirements put effort with each other on track of relationships.

The engineer needs to prepare the way to link the functional to non-functional to implement it.

Non-functional requirements linked with functional requirement to list , identify the systems level that have related each other.

The functional should enforce non-functional requirements that shall be recorded and tracked.

For example

The user needs to search the candidate list for interview.

It is functional requirement.

That the search should return the list of the candidates who are attending the interview.

It is a non-functional requirement.

Therefore it helps the engineer to avoid overlap and that relates to each other.

And it keeps the track the relationship between functional and non-functional requirement.

Question No 3

Company Decide to:

If the company decided to close down a number of offices that were specialized in using agile methods they may face a multitude of difficulties. When a company is driven by a close team and is divided they will be unable to have daily meetings, which can cause issues with communication, programming in pairs would not be possible, a communication gap would be created, productivity will slow down due to communication issues, and detecting errors would be quite difficult. These problems can be avoided by creating merging offices together so pair programming and daily communication can be established. If that is not possible, a communication platform consisting of webcams, desktop viewing software, and microphones should be created to allow better communication.

Question No 4

Discover ambiguities or omissions in the following statement of requirements for a ticket issuing system.

Answer:

- An automated ticket issuing system sells rail tickets. Users select their destination, and input a credit card and a personal identification number. The rail ticket is issued and their credit card account charged with its cost. When the user presses the start button, a menu display of potential destinations is activated along with a message to the user to select a destination. Once a destination has been selected, users are requested to input their credit card. Its validity is checked and the user is then requested to input a personal identifier. When the credit transaction has been validated, the ticket is issued.

AMBIGUITIES AND OMISSIONS INCLUDE:

Can a customer buy several tickets for the same destination together or must they be bought one at a time?

Can customer cancel a request if request has been made?

How system should respond if an invalid card is input?

What happens if customer try to put their card in before selecting their destination?

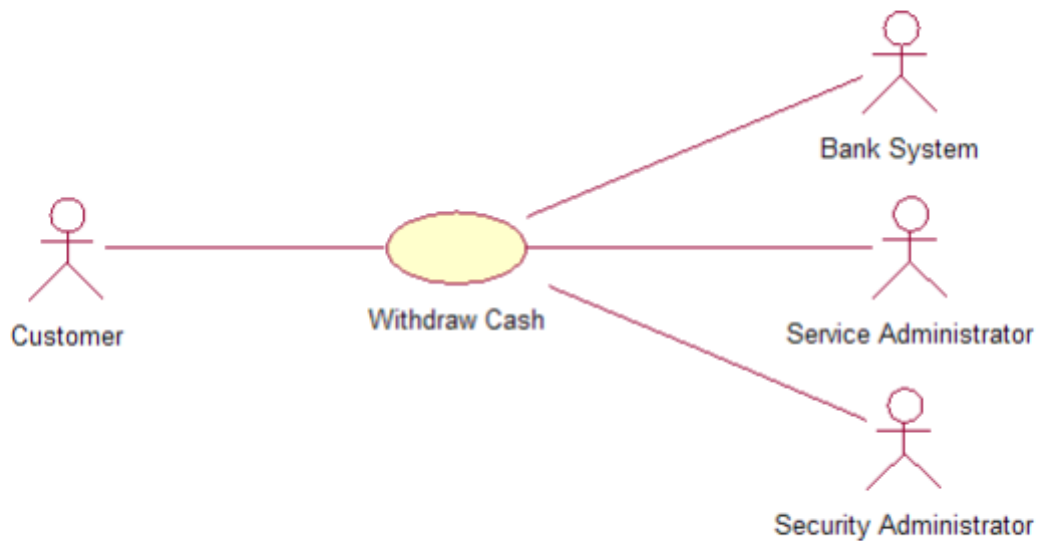
Must the user press the start button again if they wish to buy another for different destination?

Should the system only sell tickets between the station where the machine is situated and direct connections or should it include all possible destinations?

Question No 5

ATM:

2. Use-Case Diagram



Preconditions

- The bank Customer must possess a bank card.
- The network connection to the Bank System must be active.
- The system must have at least some cash that can be dispensed.
- The cash withdrawal service option must be available.

Basic Flow of Events

- **Insert Card**

The use case begins when the actor Customer inserts their bank card into the card reader on the ATM.

The system allocates an ATM session identifier to enable errors to be tracked and synchronized between the ATM and the Bank System.

- **Read Card**

The system reads the bank card information from the card.

- **Authenticate Customer**

Perform Subflow Authenticate Customer to authenticate the use of the bank card by the individual using the machine.

- **Select Withdrawal**

The system displays the service options that are currently available on the machine.

The Customer selects to withdraw cash.

- **Select Amount**

The system prompts for the amount to be withdrawn by displaying the list of standard withdrawal amounts.

The Customer selects an amount to be withdrawn.

- **Confirm Withdrawal**

Perform Subflow Assess Funds on Hand

Perform Subflow Conduct Withdrawal

- **Eject Card**

The system ejects the Customer's bank card.

The Customer takes the bank card from the machine.

- **Dispense Cash**

The system dispenses the requested amount of cash to the Customer.

The system records a transaction log entry for the withdrawal.

- **Use Case Ends**

The use case ends.