

Page → 01

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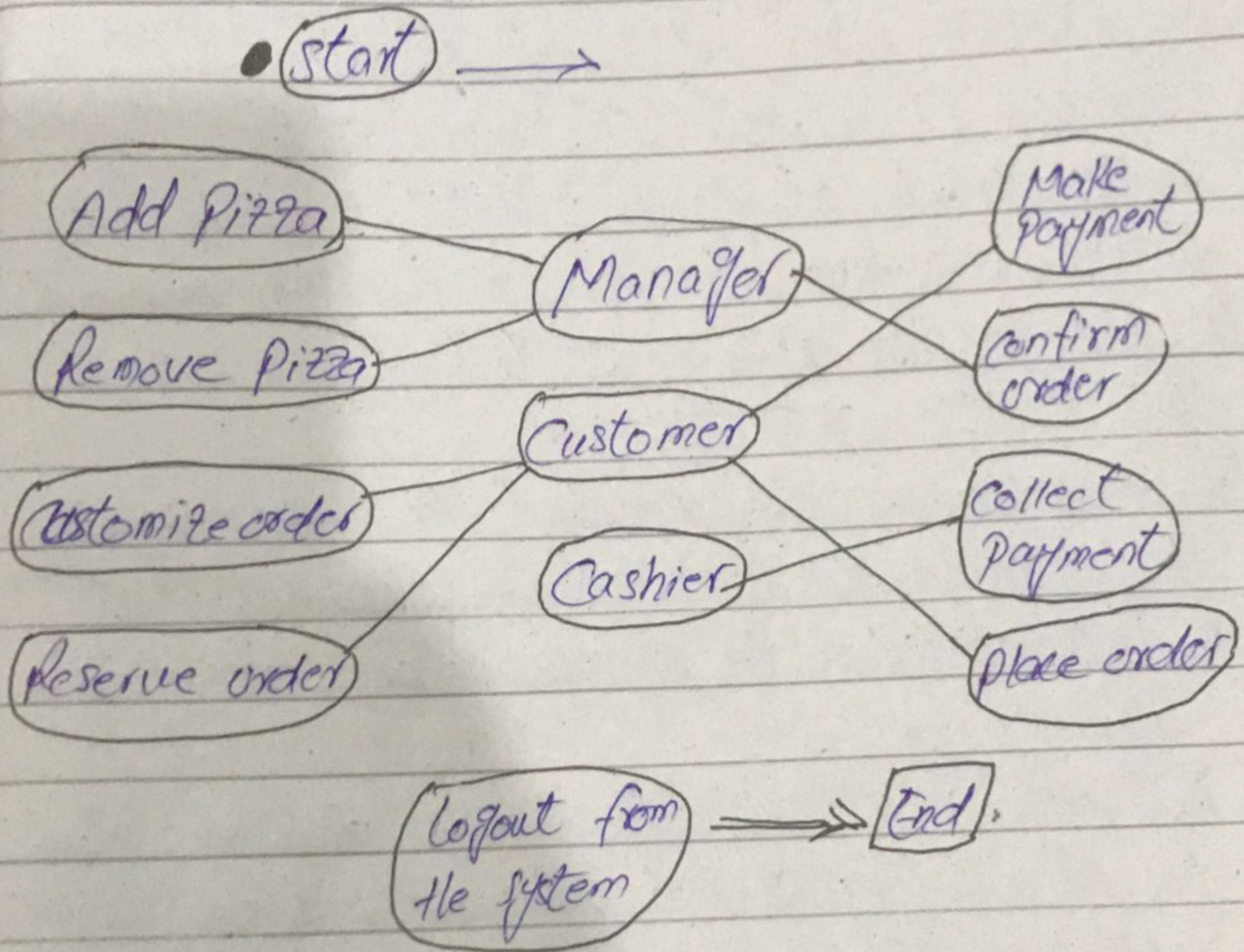
Subject → Software Engineering

Section → (A) BS (SE)

Class Timing Tuesday 11:00

Q No 1 → The Pizza ordering system -

Ans 1 → The Pizza ordering system & delivery system is that -



Q No 2 → Suggest how an engineer responsible for drawing up a system requirements specification might keep track of the relationships b/w functional and non-functional requirements?

Ans 2 → Functional requirements describe the system.

Non-Functional requirements describe the expectations but it is not concerned with the system. While drawing up a system requirements specification, an engineer might keep track of the functional and non-functional requirements by ensuring the following-

(1) Design the system so that it ensures the safety security-

(2) The requirements needed to design meets the requirements such as compatibility-

(3) Implementation the system in an efficient manner-

The Non-Functional requirements defines what the expectation to get out are and the user requirements-

\* The functional requirements defines the use of the developer knowledge. It does not conflict with each other-

It is engineer needs to prepare the document depending on this Non-Functional requirements

need the natural language and functional requirements need the structured language to understand better -

① It is very difficult to manage because the functional and non-functional requirements put efforts with each other on track of relationships -

② The engineer needs to prepare the way to link the functional to non-functional to implement it -

③ The functional requirements enforce the non-functional requirements that shall be recorded and tracked -

\* ————— \*

Q no 3 → To reduce costs and the environmental impact of commuting - your company decides to closed a number of offices and to provides support for staff to work from home. However the Senior management who introduce the policy are unaware that software is developed using agile methods - which rely on close team working and pair programming - discuss how they might get around these problems?

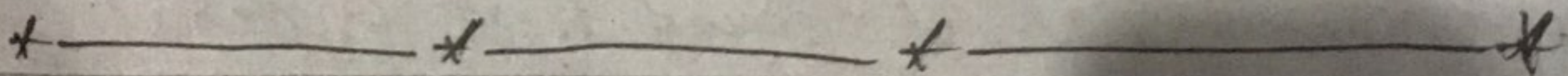
Ans No 3 → The agile methods into large companies for a number of reasons -

① Project managers who don't have experience of agile methods may be reluctant to accept the risk of a new approach, as they do not know how this will affect their particular project.

② Large organizations often have quality procedure and standards that all projects are expected to follow because of their bureaucratic nature these are likely to be incompatible with agile methods. These are supported by software tools and the use of these tools is mandated for all projects.

③ There may be cultural resistance to agile methods, specially in those organization that have a long history of using conventional system engineering processes.

Change management is the process of controlling changes to a system so that impact of changes is predictable and costs are controlled.



Page - 06

QNO4 → Discover difficulties / ambiguities or omission in the following statement of requirements for Part of a ticket-issuing system?

Ans 4 → Ambiguities and omission the following statement of requirements for part of a ticket issuing system is that.

- ① Can a customer buy several tickets for the same destination together or must be bought at one time.
- ② How should the system respond if an invalid card is input?
- ③ Can customers cancel a request if a mistake has been made?
- ④ What happens if customers try to put their card in before selecting a destination (as would in ATM machine)?
- ⑤ User press the start button if they want to buy another ticket for different destination?
- ⑥ Should the system only sell tickets b/w the station where the machine is situated and direct connections or should it include all possible destinations?

Page - 07

Q No 5 → Using your knowledge of how an ATM is used, develop a set of use cases that could serve as a basis for understanding the requirements for an ATM system?

Ans 5 → Use Cases are generally a set of interaction b/w the user/actor with the system to generate a desired output. The requirements of the ATM are given below.

- ① Insert ATM Card -
- ② Enter pin -
- ③ Perform required transaction -
  - \* Withdrawl -
  - \* Deposit -
  - \* Transfer -
  - \* Change pin -
- ④ Exit -

Both Customer and Bank are treated as actor. Actors are the one who interacts with the system.

Withdraw Cash:

Actors: Customer, ATM, Accounting system

Page - 08 -

Inputs: Customer's Card, PIN, Bank Account details.

Output: Customer's Card, Receipt, Bank Account details.

Normal operation: The customer inputs his Card into the machine. He is prompted for a PIN which is entered on the keypad. If correct he is presented with a Menu of options. The withdraw cash option is selected. The customer is prompted with a request for the amount of cash required and inputs the amount. If there are sufficient funds in his account the cash is dispensed a receipt is printed and the account balance is updated. Before the cash is dispensed. The card is returned to the customer who is prompted by the machine to take their card.