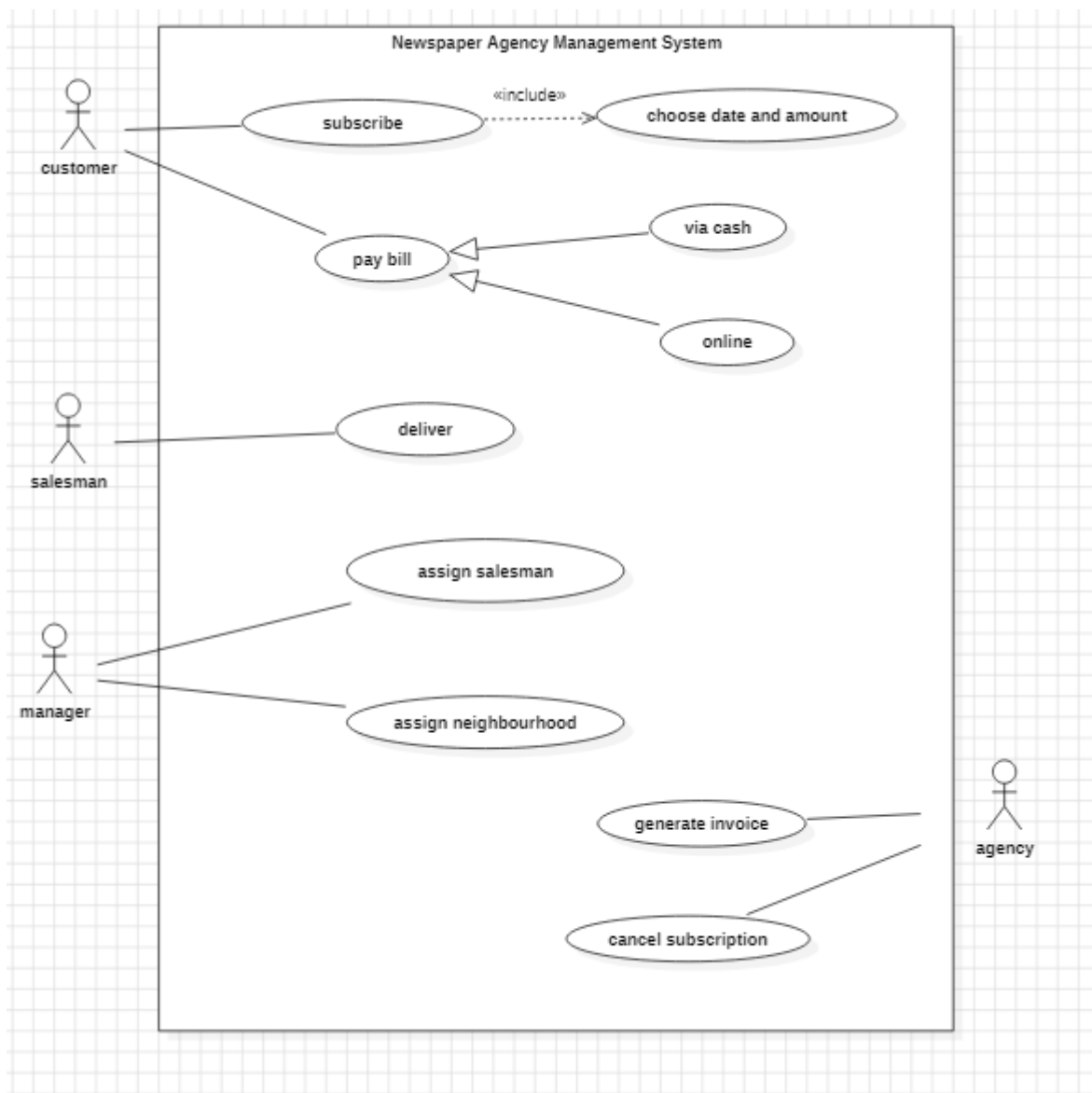
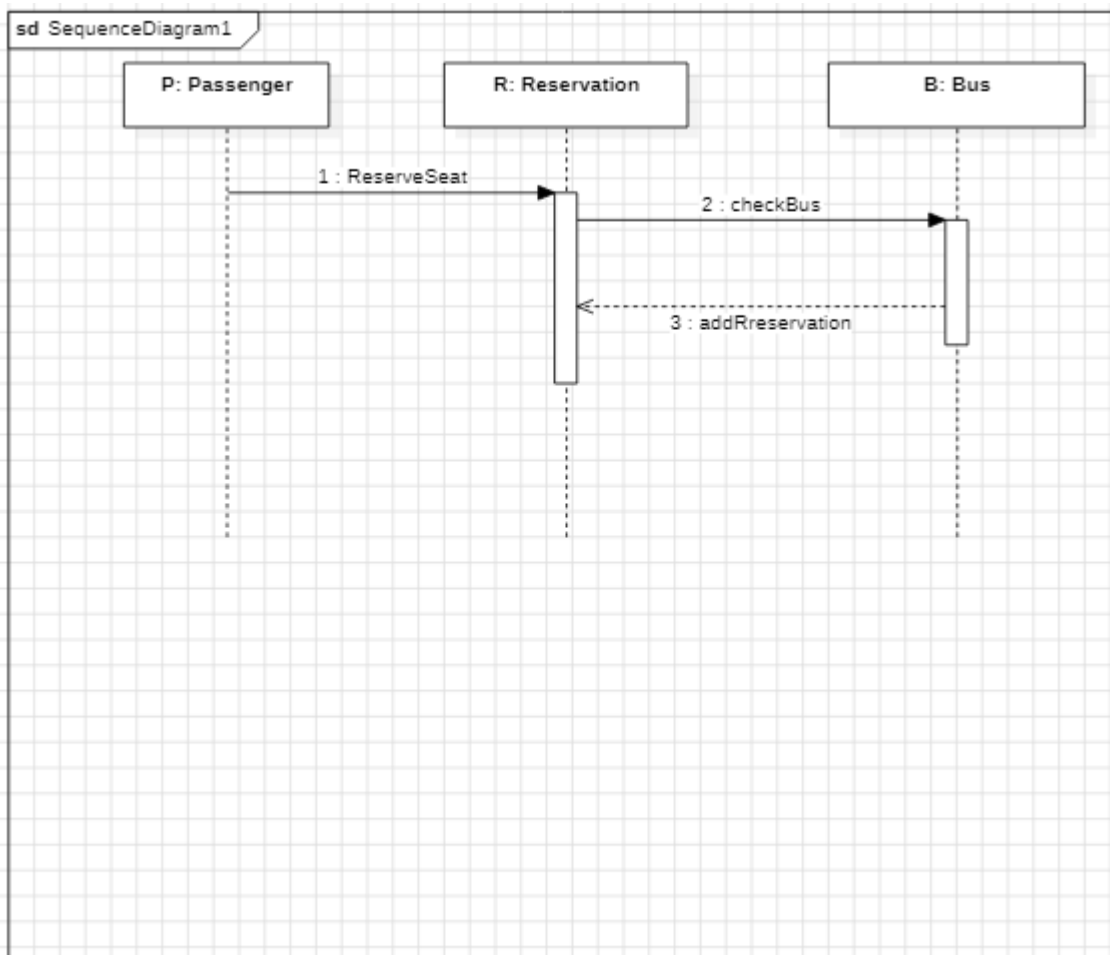


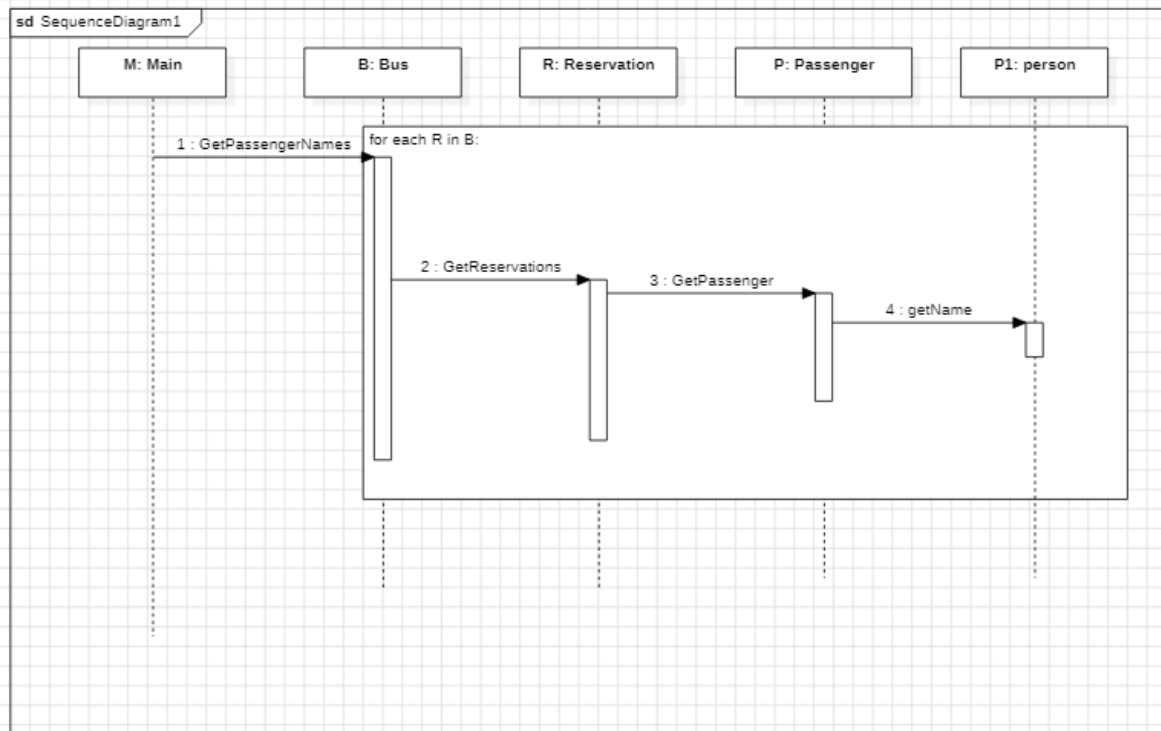
## Question no.01:



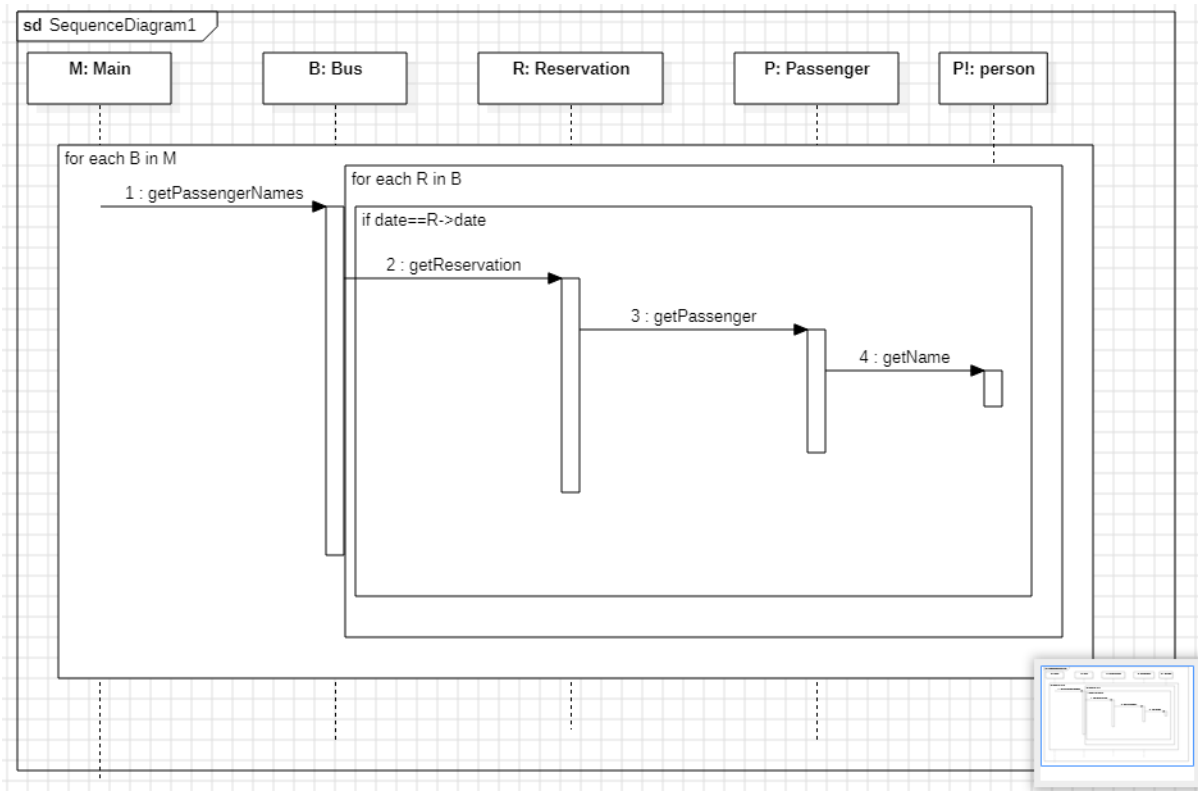
## Question no.02(a):



## Question no.02(b):



## Question no.02(c):



## **Question no.03**

**4)**

Use Case: Cash withdrawal.

System: Automatic Teller Machine(ATM).

Actors: Customer, ATM machine, bank system.

Pre-conditions:

- The ATM is operational and functional.
- The customer possesses a valid bank account.
- The account has sufficient funds.
- The customer knows their account's PIN..

Main flow of events:

1. Customer: Inserts the ATM card.
2. ATM: Requests the customer's PIN.
3. Customer: Provides the PIN.
4. ATM: Validates the PIN with the banking system.
5. Customer: Gets access if the PIN matches.
6. ATM: Offers various transaction options such as cash withdrawal, deposit, fund transfers, and balance inquiry.
7. Customer: Chooses the "cash withdrawal" option.
8. ATM: Prompts the customer to enter the desired withdrawal amount.
9. Customer: Inputs the desired amount.
10. ATM: Confirms the availability of the requested amount in the customer's account with the banking system.
11. ATM: If validated, deducts the amount from the account and dispenses it.
12. Customer: Retrieves the dispensed cash.
13. ATM: Provides a transaction receipt detailing the withdrawal, remaining balance, and timestamp.
14. Customer: Receives the transaction receipt.

Alternative flows:

- 1.If the ATM isn't functioning, it shows an error suggesting trying another machine.
- 5B. If a mismatched PIN is provided, the ATM secures the card to prevent potential unauthorized access.
- 11B. If the account doesn't have the requested funds, an alert is displayed notifying the customer of the shortfall.

## 5)

Use Case: heat food

System: microwave oven.

Actors: user, microwave oven

Pre-conditions:

- The microwave is operational.
- The microwave is connected to power.

Main flow of events:

1. User: Sets the dish inside the microwave and secures the door.
2. Microwave Appliance: Dims or turns off its indicator light, signifying it's prepared to operate.
3. User: Adjusts the heating duration using the appliance's interface and activates the heating sequence.
4. Microwave Appliance: Produces microwaves, warming the dish while the internal timer reduces.
5. Microwave Appliance: At the end of the set duration, it emits an auditory or visual signal.
6. User: Opens the microwave door, removes the warmed dish, and ensures the device is switched off or disconnected.

alternative flows:

1.Microwave malfunctions.

6B. If the meal hasn't warmed enough, the individual may restart the procedure.