ICS222 – Object Oriented Analysis and Design

LAB 6: Interaction Diagrams

1. Consider a Sale Process Scenario for a cashier processing sale activities in a supermarket. The cashier is required to process any purchasing (sale) activity by the customer. The customer will firstly put their goods on the cash counter. The cashier will then enter the item ID (could be the barcode) and its quantity, so that the system can give the description of the item and total price. The process is repeated until all items are scanned and recorded as sale. The process will end afterwards, and will require the customer to pay the amount indicated.
   The Use Case has been thoroughly analyzed and identified below:
   1. Cashier starts a new sale.
   2. Cashier enters item identifier (should be barcode of item).
   3. System records sale item and presents item description, price and running total.
   4. Cashier repeats steps 2 to 3 until all items processed.
   5. System presents total.
   6. Cashier informs the customer the total and asks for payment.
   7. Customer pays and System handles payment.

   Draw the sequence diagram

2. Draw the collaboration diagram for the following scenario

   Model a scenario of the Withdraw Money use case of a Bank ATM system. The user is able to make withdrawal of money. The system employs a standard procedure of validating the card and account holder's password.

   Main Flow of Events:

- Customer arrives at the ATM machine and inserts a bank card.
- The system requests for user authentication (request PIN number).
- Customer inserts PIN number.
- System prompts user to select services.
- Customer request withdrawal of money.
- System prompts the amount of withdrawal.
- Customer enters withdrawal amount.
- System displays success of request message, ejects card and dispense money.
- User collects card and money.

3. Draw the sequence diagram and collaboration diagram of your python project