1. **Prepare an interaction model from the given details.**
   Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

   Use case Model
   - ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**
     At least one object creation, alt, loop, ref is expected)

   Activity Model
   - ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB01:'Accountant' a personal Accounts keeping application.

A personal account management system named "Accountant" allows user to open a Term Deposit (Fixed deposit Account which matures after specified duration and returns money along with computed interest).

User requests for a new Term Deposit, accountant asks for the mandatory information like Deposit Amount, duration in years/months/days and Source account number (from which the amount will be transferred). After receiving this data accountant cross checks the availability of amount in the source account. Insufficient amount provides a warning. User can change the mandatory data.

After validating the availability, accountant fetches the interest rate from Bank (of source account) website for the duration and amount. Accountant displays estimated maturity amount, maturity date and interest rate. User confirms the request. Accountant adds a 'Withdrawal' transaction ('Income' is other possible transaction) for source account by setting deposit date, maturity date, interest rate and amount transaction (as "TD") in the transactions table.

Accountant adds a new entry to the Term deposits. User can cancel request at any time.

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   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**

At least one object creation, alt, loop, ref is expected)

Activity Model

- ✓ Draw Detail Activity model with swimlanes (with at least one pair of fork and join)

QIMB02:'Share broker' a company share buy and sell application.

User can buy a company share using Share broker application. User opens the application. 'Share broker' application displays the share account of the customer. Account shows the list of shares owned by the customer. If the time of the day is within the market hours (9am – 3pm), Customer can select option 'Buy share' (otherwise this option is not allowed). Application asks the customer details like company name, number of shares and at what purchase price (e.g customer can ask for TATA MOTORS, 10 shares, at purchase price of Rs. 250.00 each.). Share broker application checks the stock exchange available deals. If there is a matching 'sell' request which can either complete or partially fulfil (e.g. TATA MOTORS, 8 shares, at purchase price of Rs. 250.00 each.), then Application marks the request as partially done with purchase of 8 shares, adds 8 shares to the customer's account and adds the buy request for remaining 2 shares in to the stock exchange queue.

3. **Prepare an interaction model from the given details.**
   Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

   Use case Model

   - ✓ Describe the behavior of system by identifying at least 5 major Usecases.
   - ✓ Detailed Use case model with UML 2.0 notations.

   Sequence model

   - ✓ Identify 3major scenarios and draw sequence diagram for each.
   - ✓ Detailed Sequence model with UML 2.0 notations
     At least one object creation, alt, loop, ref is expected)

   Activity Model

   - ✓ Draw Detail Activity model with swimlanes (with at least one pair of fork and join)

QIMB03: Fisher-price Toy Company wants to develop toy vending machine for their retail store. The TVM should have facility of selection of toy, display features, price information, pay bill, dispatch item. The customer is allowed to select multiple items and bill will be calculated. The customer can pay bill by using card or special coin purchased from shop. On the basis of size of toy box, the dispatcher will open and dispatch the item. The store manager is responsible for maintenance of TVM, which includes filling toys, electronic, electrical and mechanical maintenance, generating reports. Write detailed problem statement.

4. **Prepare an interaction model from the given details.**
   Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

   Use case Model
   - ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**
     At least one object creation, alt, loop, ref is expected)

   Activity Model
   - ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB04: Your college wants to schedule and conduct workshop in recent technology for final year students. The students of all departments are informed (Notices), registrations are taken, speakers are invited, certificates are prepared. Consider other relevant activities

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   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**
     At least one object creation, alt, loop, ref is expected)

   Activity Model
   - ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB05: Prassana travels Booking system has facility to search buses, check availability, book tickets, view routes etc. You can search buses by date, time, type of buses. Assume necessary information.

6. **Prepare an interaction model from the given details.**
   Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

   Use case Model
   - ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**
     At least one object creation, alt, loop, ref is expected)

   Activity Model
   - ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB06: City Pride movie booking system displays movie schedule, movie reviews, movie trailers, etc. User can search movie by date, time, movie name and Members can book tickets online using credit/debit card. Members can post movie review and ratings.

7. **Prepare an interaction model from the given details.**
   Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

   Use case Model
   - ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**
     At least one object creation, alt, loop, ref is expected)

   Activity Model
   - ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB07: Teaching and Learning management system of department is responsible for various activities performed during entire semester. Various committees such as time table, seminar, project, unit test, attendance etc. use this system from start till report generation. At the start of semester, subject choices are taken from faculties. HOD allots subjects and timetables for classes and labs are generated. The attendance is monitored and defaulter list is generated at the end of every month. Unit tests are conducted twice a semester. T/W is calculated on the basis of attendance percentage and unit test performance. Student with less than 75% attendance is detained. Assume various activities performed by various committees. Assume necessary details.

8. **Prepare an interaction model from the given details.**
   Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

   Use case Model
   - ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
   - ✓ **Detailed Use case model with UML 2.0 notations.**

   Sequence model
   - ✓ **Identify 3major scenarios and draw sequence diagram for each.**
   - ✓ **Detailed Sequence model with UML 2.0 notations**
     At least one object creation, alt, loop, ref is expected)

   Activity Model
   - ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB08: At the end of third year TP cell of institute asks students to register with training and placement site. While registering student, personal, educational and extracurricular information with resume, is collected by portal. The companies have to register with college portal and have to submit selection method and criteria. The resumes are matched with companies and interviews are scheduled by T & P office. The results of every round are displayed online. Assume necessary details.

9. Prepare an interaction model from the given details.
Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

Use case Model

- ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
- ✓ **Detailed Use case model with UML 2.0 notations.**

Sequence model

- ✓ **Identify 3major scenarios and draw sequence diagram for each.**
- ✓ **Detailed Sequence model with UML 2.0 notations**
  At least one object creation, alt, loop, ref is expected)

Activity Model

- ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB09: Organization's Employee management system has facility to edit profile, view salary, apply for leave, task/job allotment information etc. When candidate is selected by organization, he/she has to register with EMS. The manager allots works to different employees on the basis of their skill set. The schedules are generated and sent to employees. On successful completion of tasks the reward points are given to employees. The rewards points are considered for next pay hike given to employees.

10. Prepare an interaction model from the given details.
Prepare a use case model, sequence model and activity model from the given description using UML 2 notations.

Use case Model

- ✓ **Describe the behavior of system by identifying at least 5 major Usecases.**
- ✓ **Detailed Use case model with UML 2.0 notations.**

Sequence model

- ✓ **Identify 3major scenarios and draw sequence diagram for each.**
- ✓ **Detailed Sequence model with UML 2.0 notations**
  At least one object creation, alt, loop, ref is expected)

Activity Model

- ✓ **Draw Detail Activity model with swimlanes (with at least one pair of fork and join)**

QIMB10: College's Library management system has facility to search and reserve books on their intranet site. Library staff and librarian is responsible for maintaining book catalogue, manage library accounts, purchase of new book. On late return of book, Student has to pay fine. Assume typical LMS scenario and write detailed problem statement.