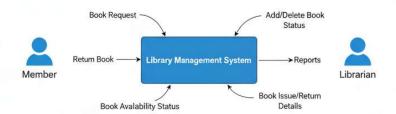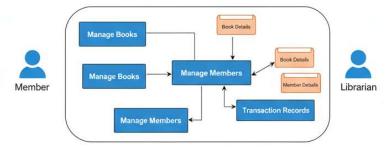Name:- Patel Bandish H.

Enrollment No:- 2402031030054

Library Management System DFD
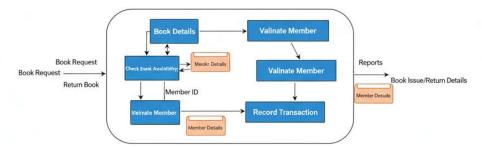
Level 0: Context Diagram
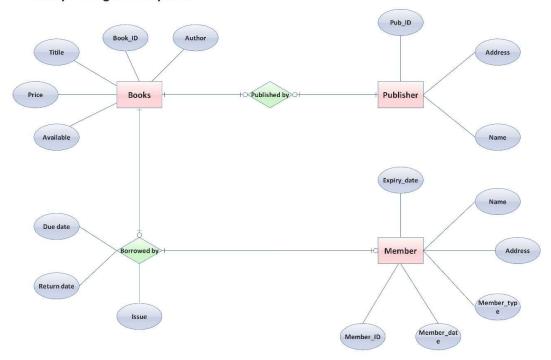

Level 1: Detailed DFF

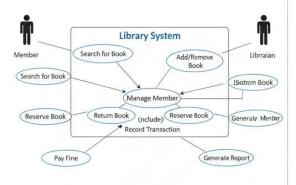## Level 2: Process "Handle Transactions" Detailed DFF
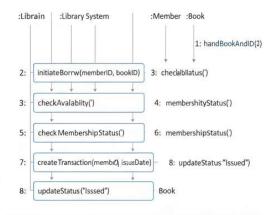
Library Management system

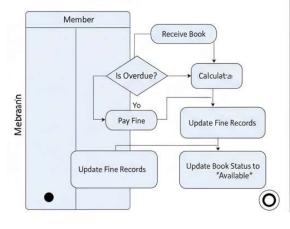# Library Management System UML Diagrams

UML Use Case Diagram

Library System

- Member
- Librraian
- Search for Book
- Add/Remove Book
- Search for Book
- ISatrom Book
- Manage Member
- Reserve Book
- Return Book
- ‹nclude›
- Reserve Book
- Generale Menbα
- Record Transsction
- Pay Fine
- Generate Report

UML Sequence Diagram: Borrow a Book

:Librain :Library System :Member :Book

1: handBookAndID(3)

2: initiateBorrw(memberID, bookID)   3: checkbllatus(')

3: checkAvalablity(')   4: membershityStatus(')

5: check MembershipStatus(')   6: membershipStatus()

7: createTransaction(membrO, issueDate)   8: updateStatus "Issued"

8: updateStatus("Isssed")   Book

UML Activity Diagram: Return Book

Member

- Receive Book
- Is Overdue?
- Calculateₐ
- Yo
- Pay Fine
- Update Fine Records
- Update Fine Records
- Update Book Status to "Available"

Mebraann

UML Class Diagram

Member
- name
- (ıaı/Member)
- generateReport

1

Member
- memberID
- address,
- email,
- borrowedBooks)

Book
- transactionID
- (suate)
- returnDate)
- rensenteReport

1

Book
- aitile)
- issureDate
- ISBN
- upddateStatvs")

1

Transaction
- liibnrrianID
- logitD
- addMenber)
- generaiefepert)

Fine
- AditeID
- amount
- paymentScatus

Author