UE19CS353 – Object Oriented Analysis and Design with Java
Theory ISA (Mini Project)

Presentation on
EXAM REGISTRATION SYSTEM

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Project Description

- Exam Registration System is a web based application where students can register for an exam on a date and pay for exams.
- The project has a login and a sign up page for all the students/users
- The user can also register and view the exams. Also CRUD operations.
- The payment portal is also available for debit and credit card

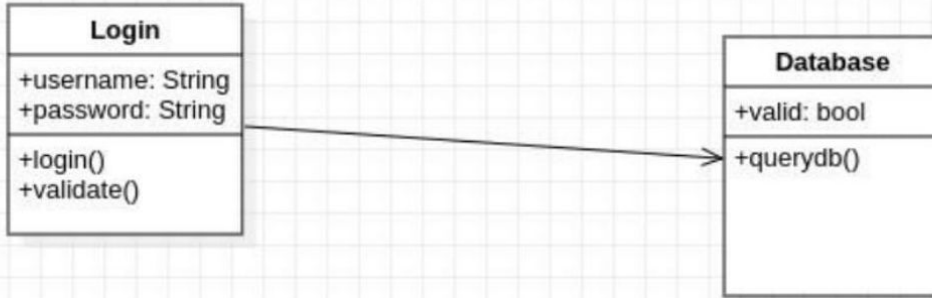GitHub Link - https://github.com/ManaliTanna/OOADJ_Project

Analysis and Design Models
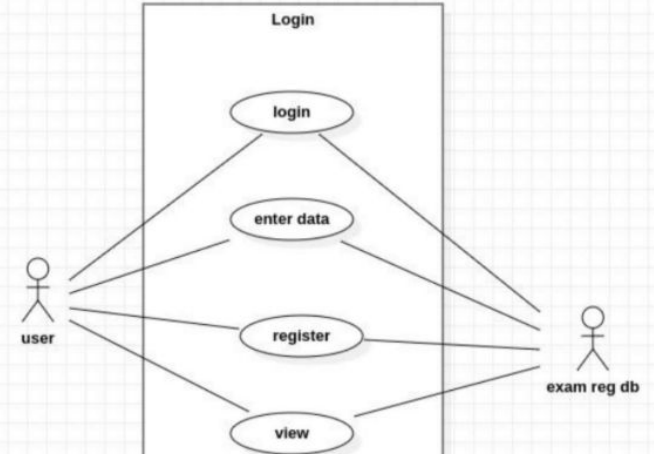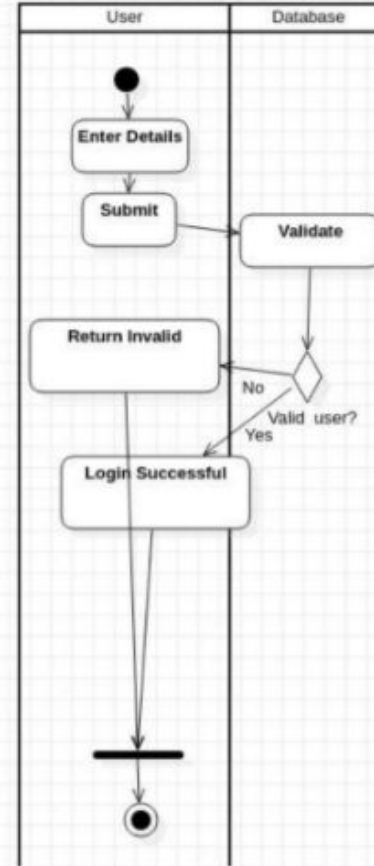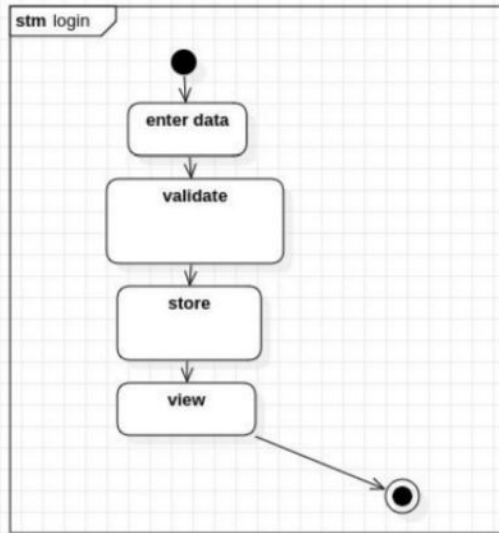
MAJOR AND MINOR FUNCTIONALITY 1

SIGN UP
SIGN IN

USE CASE DIAGRAM

CLASS DIAGRAM

Login
+username: String +password: String
+login() +validate()

Database
+valid: bool
+querydb()

Login

login

enter data

register

view

user

exam reg db

STATE DIAGRAM

stm login


```
        ●
        ↓
   ┌──────────┐
   │ enter data│
   └──────────┘
        ↓
   ┌──────────┐
   │ validate  │
   │           │
   └──────────┘
        ↓
   ┌──────────┐
   │  store    │
   │           │
   └──────────┘
        ↓
   ┌──────────┐
   │  view     │
   └──────────┘
            ↘
              ◉
```

User	Database


```
              ●
              ↓
       ┌────────────┐
       │Enter Details│
       └────────────┘
              ↓
       ┌────────┐        ┌──────────┐
       │ Submit │───────→│ Validate │
       └────────┘        └──────────┘
                                ↓
 ┌──────────────┐      ◇
 │ Return Invalid│←────  Valid user?
 │              │  No
 └──────────────┘      Yes
       │           ↓
 ┌──────────────────┐
 │ Login Successful │
 └──────────────────┘
              ↓
       ━━━━━━━━━━━
              ↓
              ◉
```
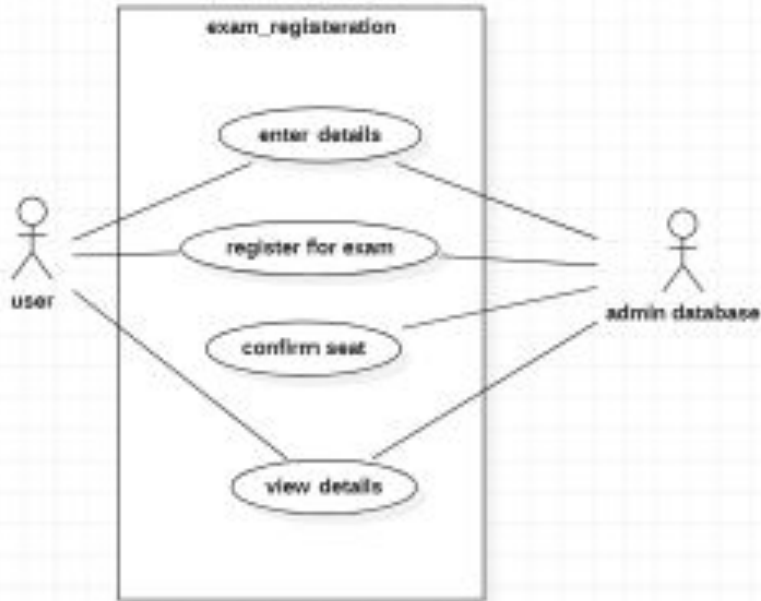
ACTIVITY
DIAGRAM

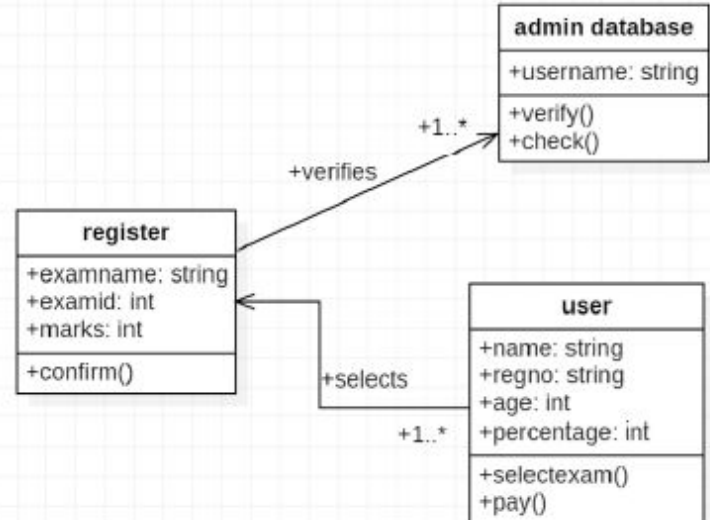# MAJOR AND MINOR FUNCTIONALITY 2

EXAM REGISTRATION
CRUD OPERATIONS

ACTIVITY DIAGRAM

enter details

is seat available?

yes → confirm seat

no → reject seat

view details

STATE DIAGRAM

logged in → enterDetails → registered

seatavailable

confirmed

rejected

confirmSeat

logOut
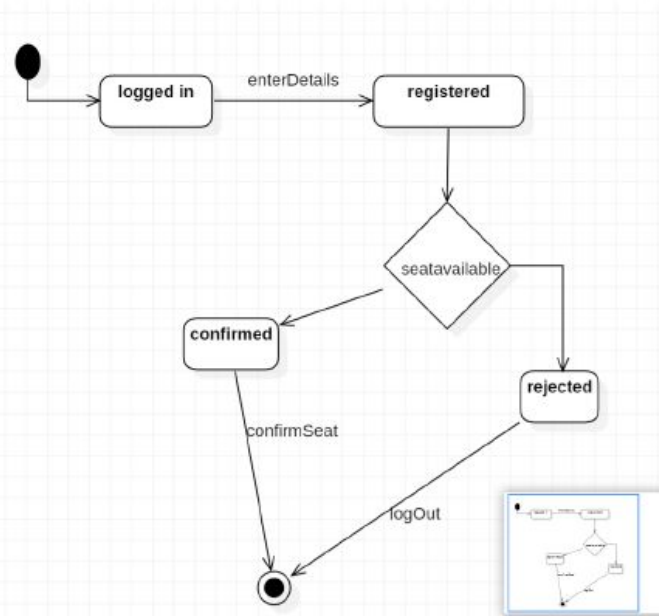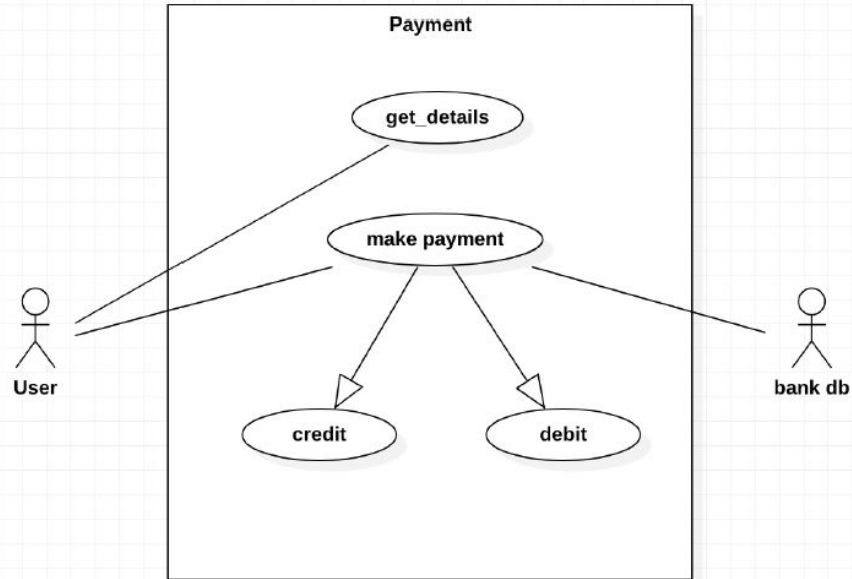
MAJOR AND MINOR FUNCTIONALITY 1
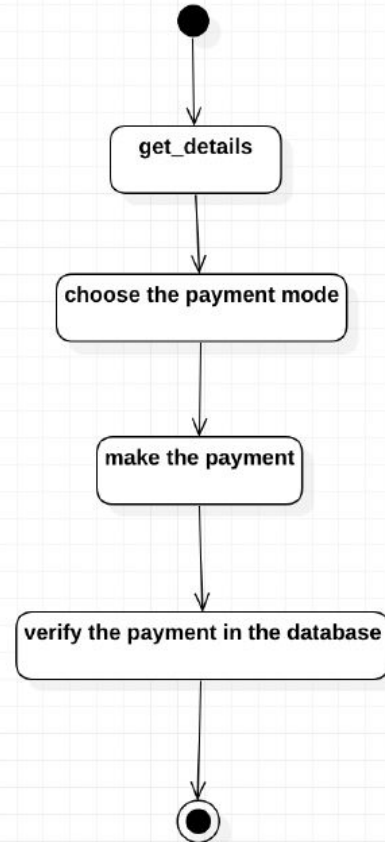
PAYMENT PORTAL
VERIFYING STATUS

Use Case:
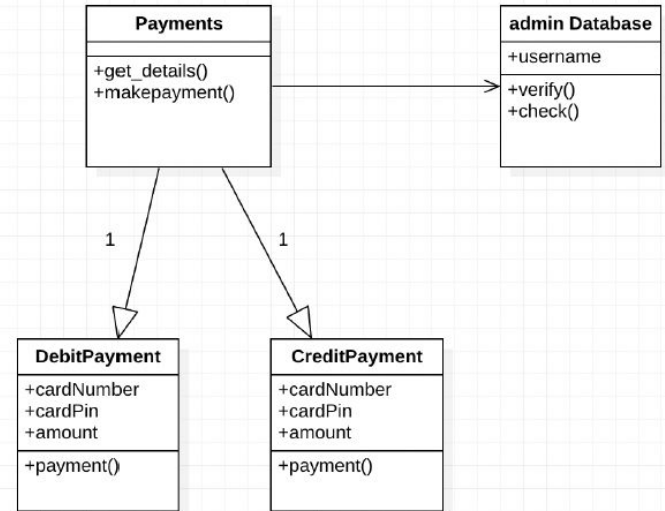
Class Diagram:

ACTIVITY DIAGRAM

State Diagram:

Tools and Frameworks Used

- MYSQL 8(MySQL workbench)

- SPRING TOOL SUITE

Design Principle and Design Patterns Applied

- **Coupling** - low coupling has been maintained as the modules which interact with each other are not so dependent on the other.

- **Cohesion** - high cohesion is maintained by keeping all related code in a single place for example code related to calculation of scores along with displaying results is written in the results file.

- **Single class responsibility** – each class should have a single responsibility for example answers class is only used to display the answers to all the questions at once, connect class has the sole purpose of connecting to the database etc.

Design Principle and Design Patterns Applied

- **Open close** – software entities must be open for extension and closed for modification example the behaviour of the classes we have used can be extended without modifying code via inheritance/composition.

- **Singleton** - The pattern creates only one object of the class. It has a private constructor with public access for the instance.

- **MVC Architectural Pattern** was used to organize the business logic and connect it to the entity model/database.

Screenshots

Welcome to the exam registration Portal

[Sign up](#)

[Sign in](#)

Login page

Please sign in

Username

Password

Sign in

Home page

Exam Registration Portal   Home   Add Exam

ID	Subject	ExamDate			
1	gdfwfd	23/3/22	Edit	Delete	Payment
2	ooad	30/4/22	Edit	Delete	Payment

Register for Exam

Payment Portal

Make Payment

Enter Payment Method

Enter Card Number

Enter CVV

Enter Amount

Pay

Object Oriented Analysis and Design with Java (Mini Project)
Team member contributions

NAME	CONTRIBUTION
MANALI TANNA	SIGN UP, SIGN IN
MILINDA K N	EXAM REGISTRATION
UZAIR RIZWAN	PAYMENTS