MINI PROJECT – I
(2020-21)

A Hotel Management System

MID TERM REPORT

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Contents

Abstract

ABSTRACT

The objective of the project is to design Hotel Management application which enables the manager to keep the record of the hotel and the customers.

The project has been designed in JAVA technology and consists of a SQL server which acts as the database for the project.

My motivation for the project came from my enthusiasm and strong urge to learn JAVA and
MySQL which is one of the fastest growing technologies in today's world.

The Hotel Management System project mainly consists of two types of users. The customers who access the information provided by the website and the administrator who modifies and updates the information.

All the data needed for the application is stored in the form of tables in the SQL server 2000.
The report contains the details of all the tasks carried out during the entire software development life cycle of the Hotel Management Project. This document depicts all the details of the project (modules) till date.

Introduction

General Introduction to the topic

Because of the numerous advantages and benefits. Now-a-days, more and more people prefer that every small to small task should be done online, if possible, rather than manually. The mindset of the people is approaching towards technology and every person wants that his/her data should be kept safe and secured. The benefits are as follows:

1. If in a hotel, the no of rooms are in a huge number and a customer comes for booking, then the receptionist can be confused about the room so a search room module can be made which tells about the availability of room.

2. Sometimes the manager asks for details of the employees but if the data is stored manually, it can be lost easily. So we can create the database for storing the data.

3. If suppose customer wants to go to some place from the hotel so pick up service module can be used to see if any driver is available and his location. This can't be remembered manually.

Area of Computer Science

The computer has brought revolution in every sphere of human life, whether it is business, education field, governance, medical science etc. The computer has reduced the human work load, businesses are going global and everything is available at the click of mouse. Most of the hotel managers or owners have to store the details of the employees and customers in registers (hard copies) which is a very time-consuming task and this data can be lost easily. So, this hotel management system will help these managers to store the data in the database and keep the data (details) safe and secure.

Hardware and Software to be used

a. *Hardware:*
- Minimum 8GB Ram
- Disk Space 80GB

b. *Software*:
- Netbeans IDE
- MySQL database.

Problem Definition

The computer has brought revolution in every sphere of human life, whether it is business, education field, governance, medical science etc. The computer has reduced the human work load, businesses are going global and everything is available at the click of mouse. Most of the persons working in a hotel have to handle the things manually such as storing customer details, employee details and so on, which is a very time-consuming task and seems hard too. The data stored manually in registers or copies can be lost very easily so to maintain all this, a Hotel Management system is required.

Objectives of the project

The objectives of the project are as follows →
1. To develop a system for the management of hotels so that hotel owners can use this facility to provide accurate information to the customers.
2. To develop a system that has a good management of data along with integrity and minimizing redundancy.
3. To develop a system that will be user friendly in all possible ways.

Methodology

I am using core JAVA programming language to implement this project. The concept used is Swing which is used to show the framework. The resultant will be the desktop application. I am using MySql to create the database and use it for further purposes. JDBC is a concept used to connect MySQL with JAVA.

The modules used in this app are listed as follows:
• Admin
• Reception

The sub-modules in the Admin module are:
• Add Employee
• Add room
• Add drivers

The sub-modules in the Reception module are:
• Employees Info
• Manager Info
• Room
• Customer Info
• New customer
• Search room
• Pickup Service

Implementation Details

 I am making a project on *hotel management system*. JAVA Swing helps us to work on different frames. It helps to generate components, buttons and many more things. There are many classes which are part of swing. For database, I am using MySql to store certain data like employee details, customer details and much more. The database will get updated on any operation performed.

The result will be a desktop application which will run locally on IDE used. When we run our program, a frame will be opened which will act as login page for the receptionist or for manager who would be logging in. The receptionist will be asked for credentials and if the credentials enter will match exactly with those stored in the database, then the receptionist will be logged in.

Then there are two options:

1.Hotel Reception   2. Admin

Firstly, I have created a homepage that contains an image of a resort with the title of the project as "Hotel Management System" written on it. The images are taken completely from the internet along with the icons and logos. It also contains a button which will take us to the next frame which is login frame. This login frame is basically for the manager of the hotel or for the owner. He can only have access to the database and the details of the employees and customers.

For this all, I have used the concept of swing. JDBC concept is used to connect the database using MYSQL. The details of all the modules is given below :

 When we click on hotel reception option, then we have the following sub-options:

1. New customer form: If a new customer comes in hotel for staying, then we will have some details stored in the database such as id(Passport, Aadhaar, driving licence), id no, Name, gender, country, room no, checked-in status, deposited amount. When the customer give the details, then there will be a message "data entered successfully" and data will be stored in the data base.

2. Room: We can view all the rooms in the hotel with the details as room no, availability status(free or occupied), clean status(dirty or clean), Cost per night and bed type(single or double).

3. Department: We can view how many department are there in the hotel such as house keeping, front office, food and beverages, and more and their funding from the company.

4. Employee info: We can see the information of all the employees currently working in the hotel with the details as their phone no, aadhaar no, mail id, age, post(chef, waiter, manager), salary and so on.

5. Manager info: We can see the information of only the managers currently working in the hotel.

6. Checkout: If a customer is checking out, then this option may be used to delete his information.

7. Customer info: We can see the details of all the customers currently staying in the hotel.

8. Pickup Service: Suppose if the customer is at airport and wants to come to hotel , then pickup service option will be used which will search if any driver is available to take him to the hotel.

9. Room Search : Suppose if a hotel has higher no of rooms and its difficult for the receptionist to remember all the information about the particular room, so this option can be used to search for a room(along with bed type which acts as a filter as per the customer's choice).

10. Log out: If receptionist wants to logout from the server, then this option can be used.

Now, if the receptionist goes for the admin option, then it has the following sub-options:

1. Add Employee: If a person comes to work in the hotel, then this option can be used to store the details of the person such as phone no, age, gender, job(chef, kitchen staff), salary per month, aadhaar no .

2. Add Room: Suppose if the hotel undergoes some new construction and new rooms are built, then to add the rooms in the database, this option can be used.

3. Add drivers: If some new person has come for the driver's job in the hotel for pickup service, then this option can be used. The drivers data will be stored in the database such as name, age, gender, car company, brand, availability, location.

Progress Till Date and the Remaining Work

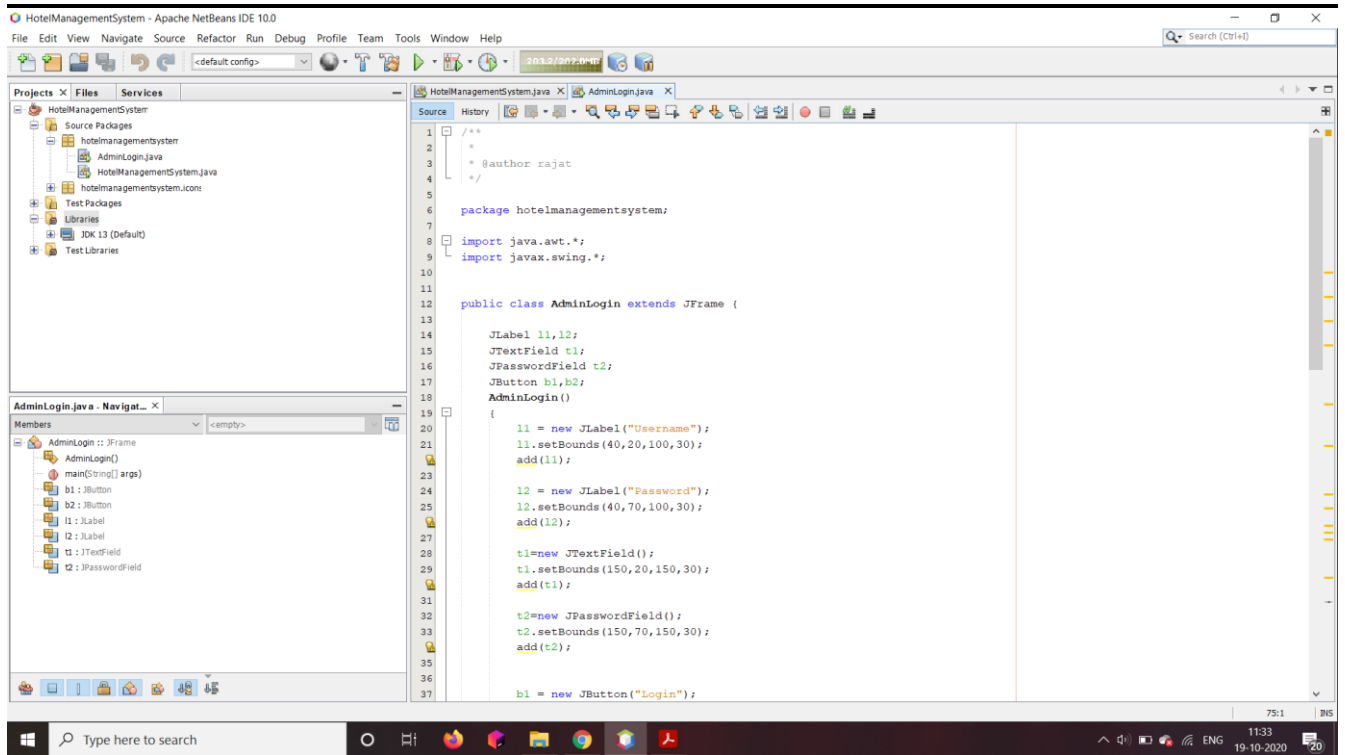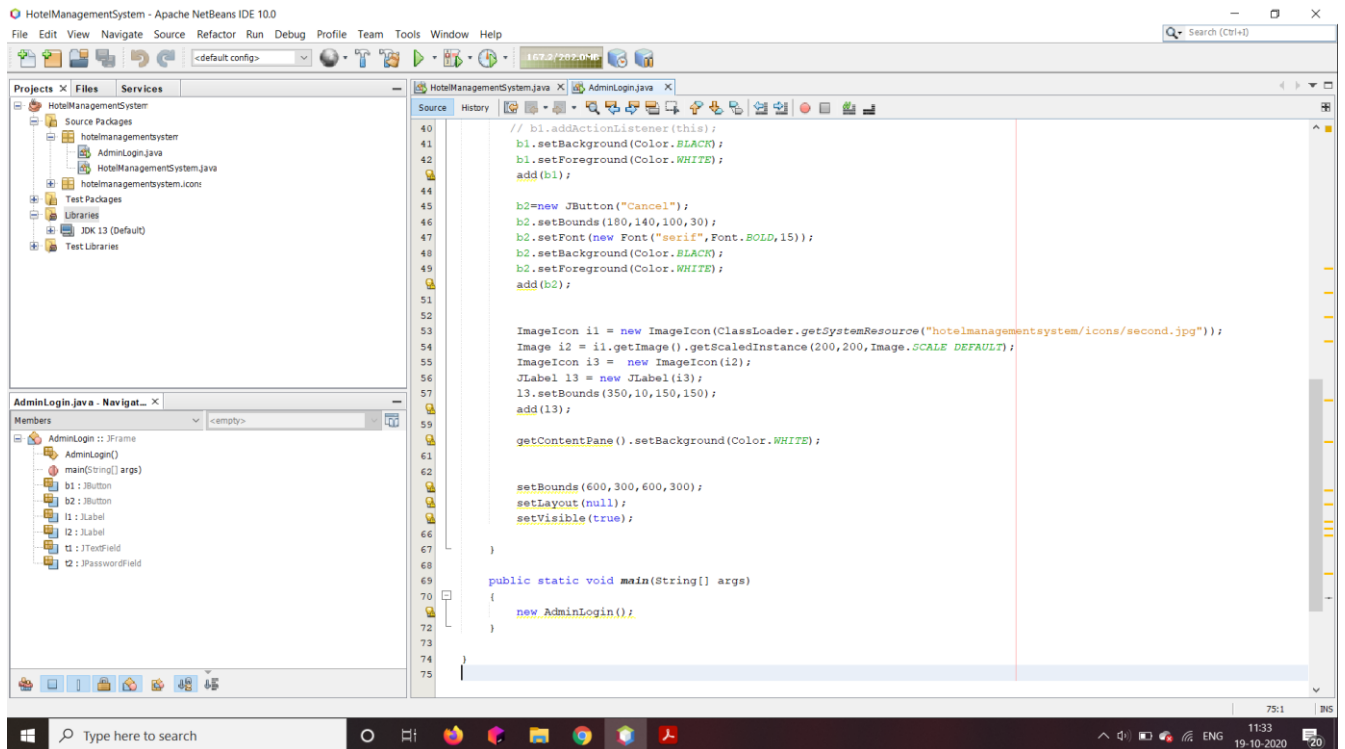Till date I have completed the homepage frame and login frame for admin and connected this with the database to store the data.
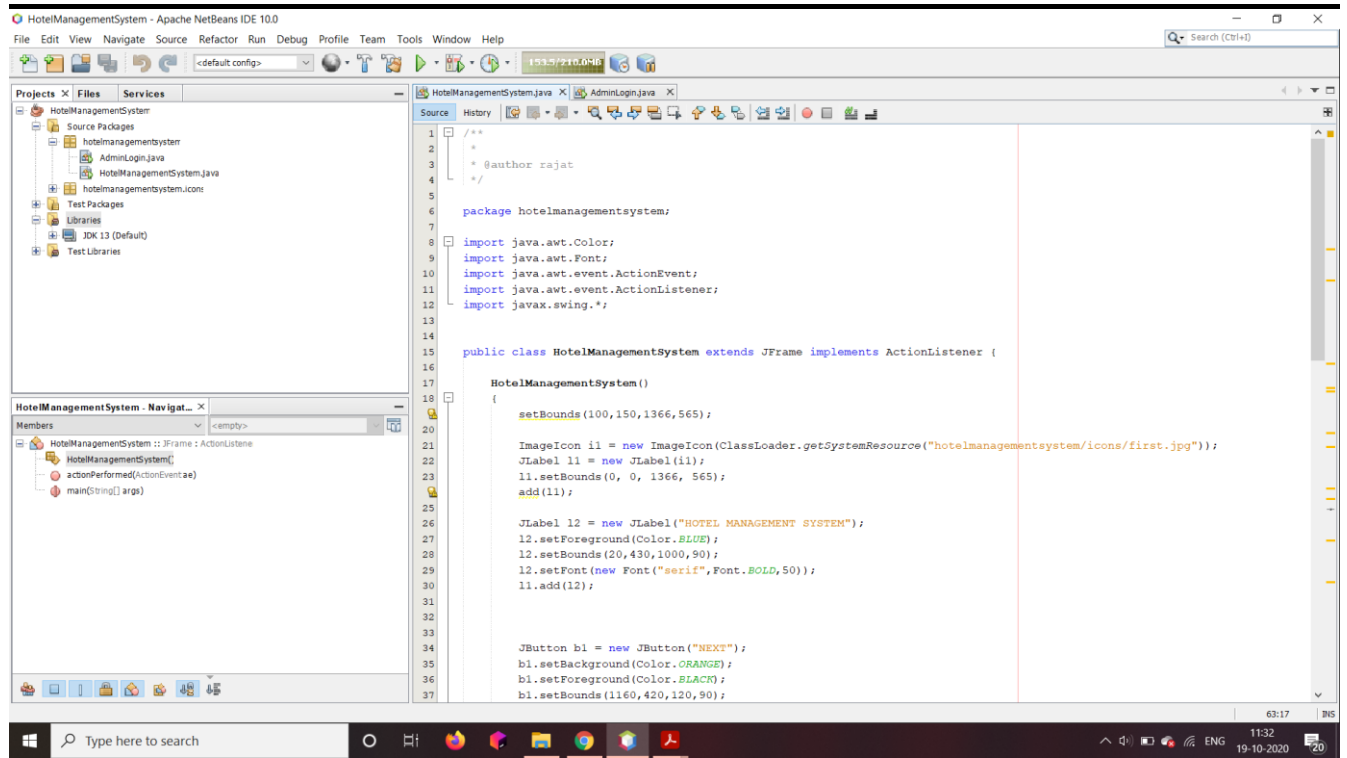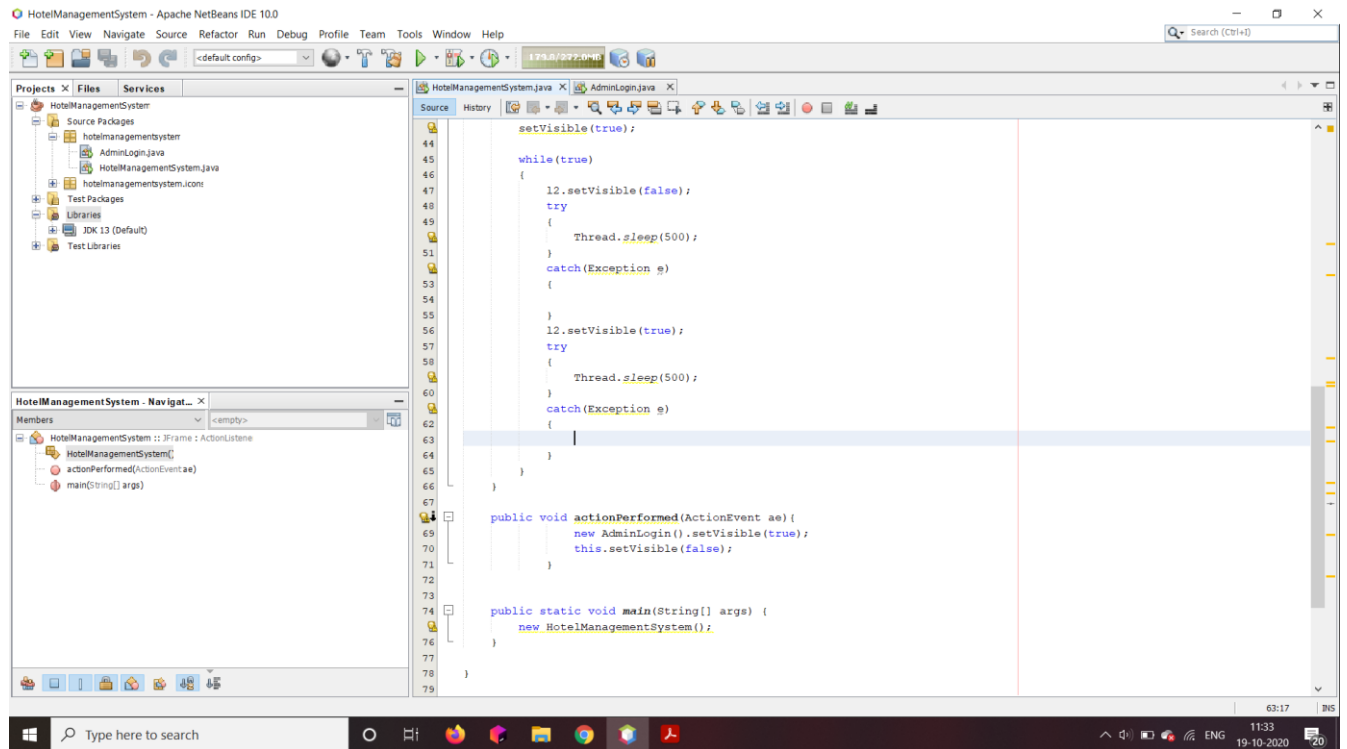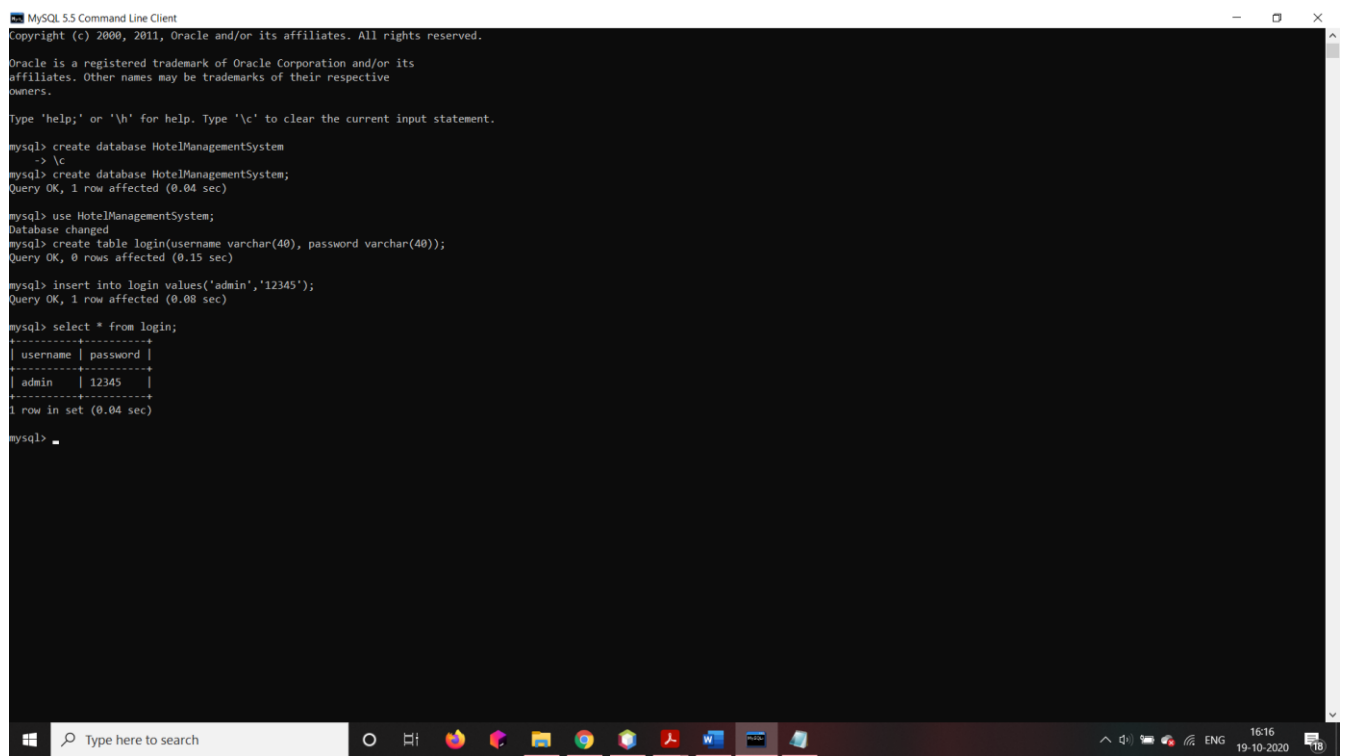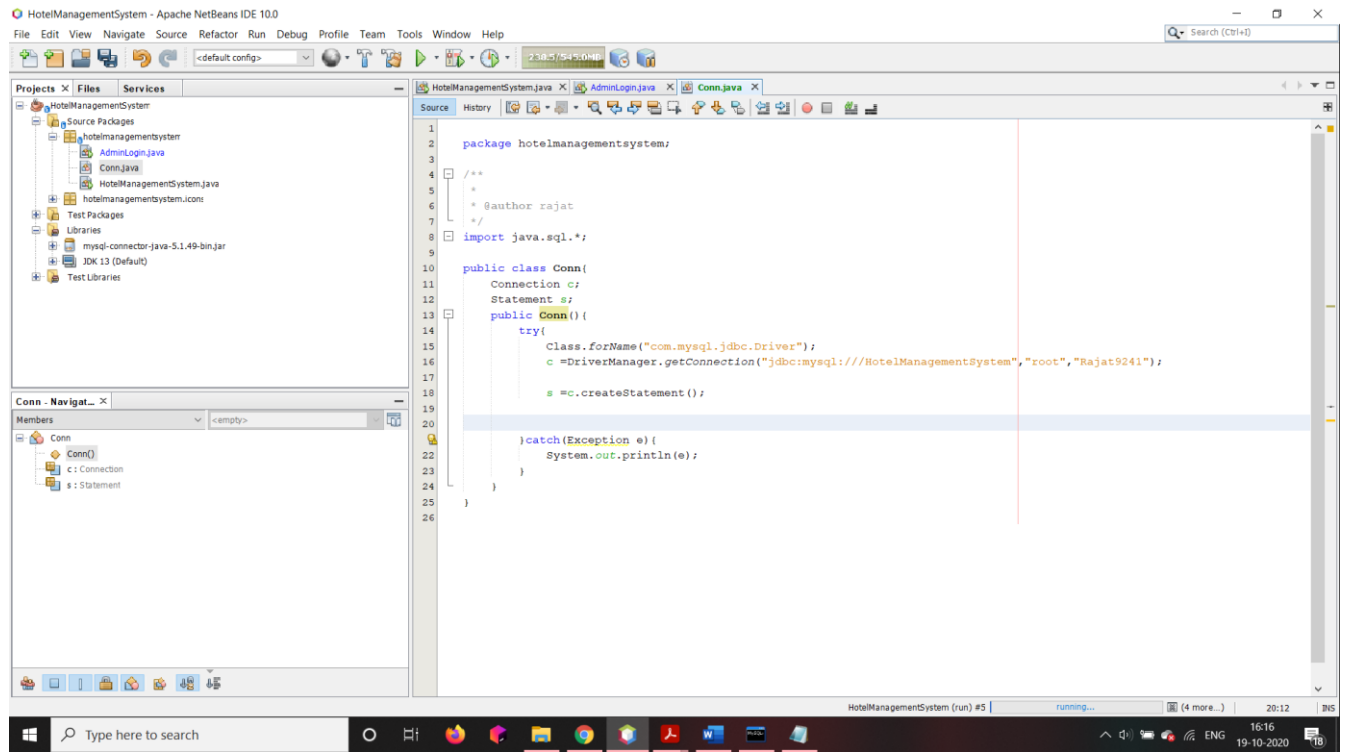
Completed modules:
1. Home
2. Admin login

Remaining modules:
1. Reception module and its sub modules:
   a. Employees Info
   b. Manager Info
   c. Room
   d. Customer Info
   e. New customer
   f. Search room
   g. Pickup Service

Screenshots

Screenshot 1 — HotelManagementSystem.java (NetBeans IDE):

```java
            setVisible(true);

            while(true)
            {
                l2.setVisible(false);
                try
                {
                    Thread.sleep(500);
                }
                catch(Exception e)
                {

                }
                l2.setVisible(true);
                try
                {
                    Thread.sleep(500);
                }
                catch(Exception e)
                {

                }
            }
        }

        public void actionPerformed(ActionEvent ae){
                new AdminLogin().setVisible(true);
                this.setVisible(false);
        }


        public static void main(String[] args) {
            new HotelManagementSystem();
        }

    }
```

Screenshot 2 — HotelManagementSystem.java (NetBeans IDE):

```java
/**
 *
 * @author rajat
 */

package hotelmanagementsystem;

import java.awt.Color;
import java.awt.Font;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import javax.swing.*;


public class HotelManagementSystem extends JFrame implements ActionListener {

    HotelManagementSystem()
    {
        setBounds(100,150,1366,565);

        ImageIcon i1 = new ImageIcon(ClassLoader.getSystemResource("hotelmanagementsystem/icons/first.jpg"));
        JLabel l1 = new JLabel(i1);
        l1.setBounds(0, 0, 1366, 565);
        add(l1);

        JLabel l2 = new JLabel("HOTEL MANAGEMENT SYSTEM");
        l2.setForeground(Color.BLUE);
        l2.setBounds(20,430,1000,90);
        l2.setFont(new Font("serif",Font.BOLD,50));
        l1.add(l2);




        JButton b1 = new JButton("NEXT");
        b1.setBackground(Color.ORANGE);
        b1.setForeground(Color.BLACK);
        b1.setBounds(1160,420,120,90);
```
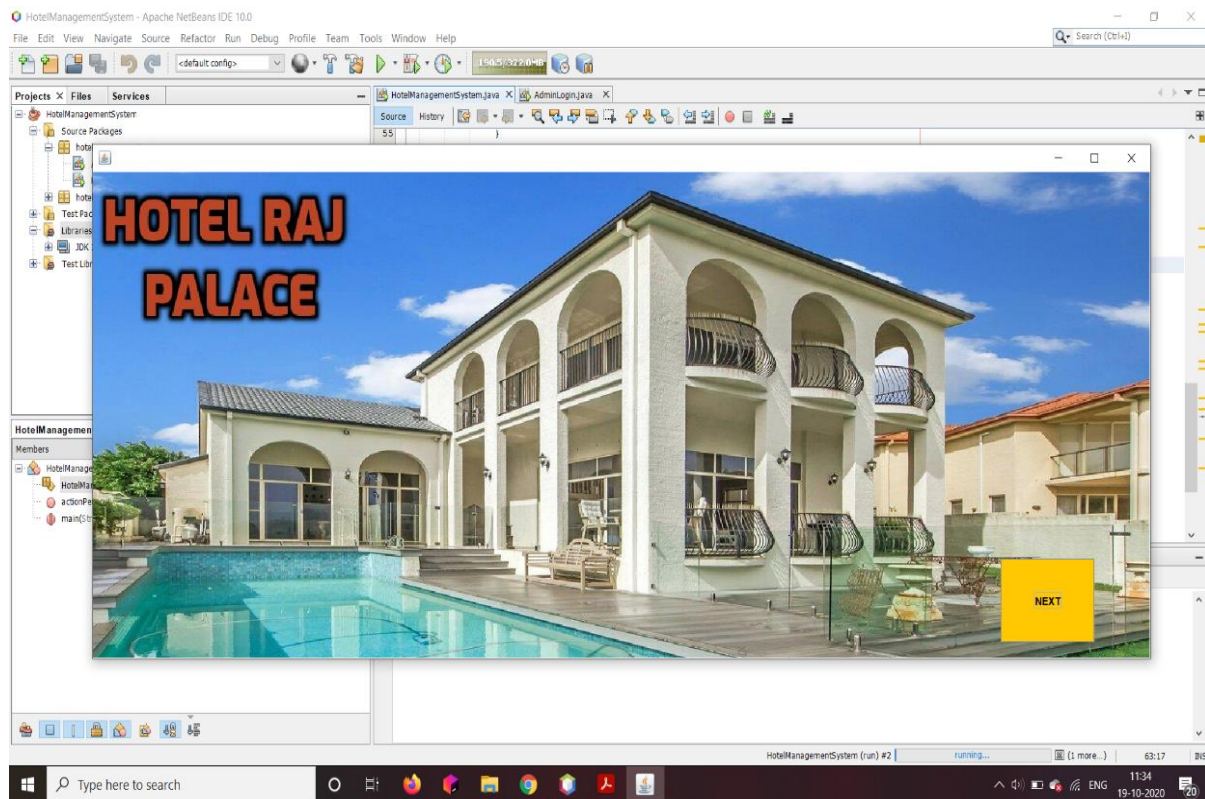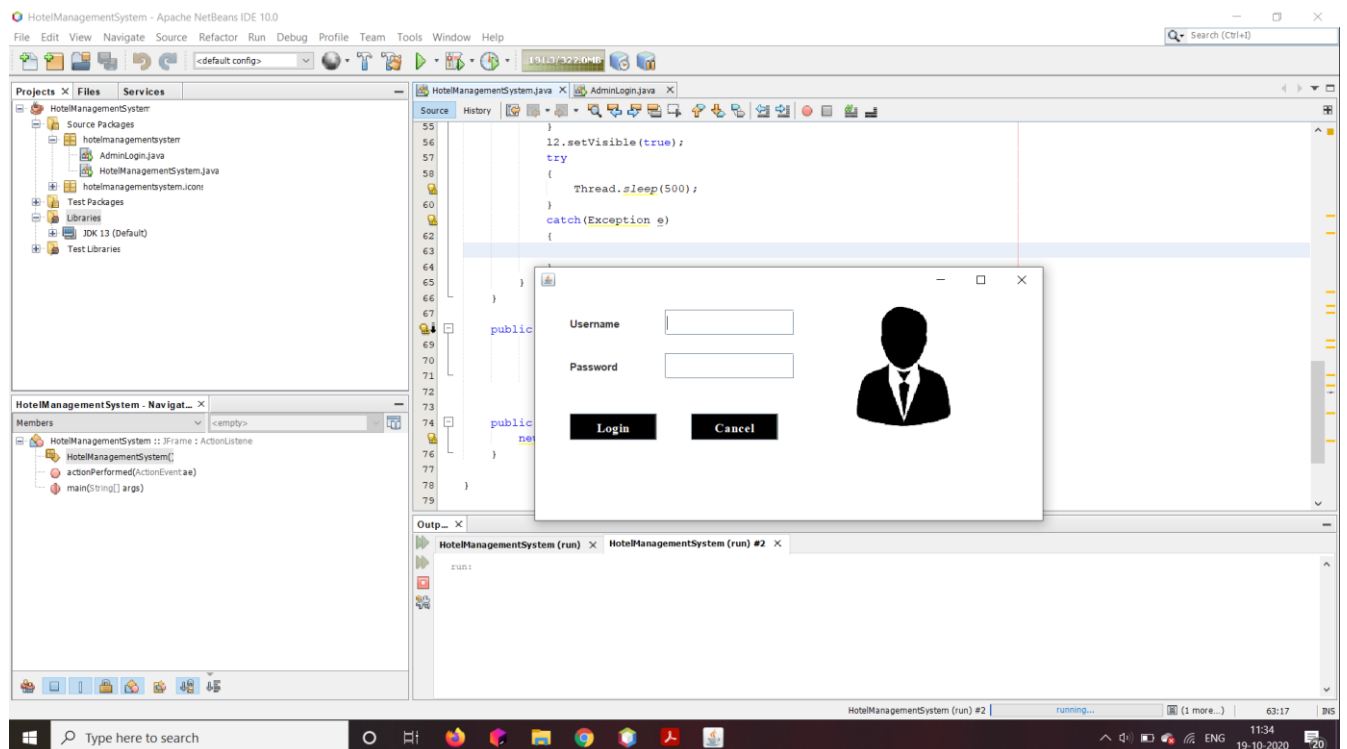
This is the code

The output is as follows:

When we click on next button, we will be directed to the following screen:

Now, we will have to enter the details. If the details match with the database, we will go to next screen otherwise message is displayed "Invalid login".

References

1. Java swing tutorials -   https://www.javatpoint.com/java-swing
2. JDBC tutorials -   https://www.javatpoint.com/java-jdbc
3. MySQL tutorials -   https://www.w3schools.com/sql/
4. Youtube Videos
5. Udemy Course