**ONLINE MECHANIC APPOINTMENT SYSTEM**

# Introduction:

The purpose of this document is to provide an overview of the Mechanic Technician Appointment System project developed using Core Java. The Online Mechanic Appointment System is an application that allows customers to perform various Mechanic Appointment activities online, such as registration, booking an appointment, viewing different services, receiving appointments, modifying appointments. The system aims to provide a secure and user-friendly interface for customers to access their accounts and perform transactions conveniently from anywhere. Here console-based event driven code is used.

# Technology Used:

1. Java: for implementing the application's logic and user interaction.
2. MySQL: Employed as the database management system for storing and retrieving data.
3. Eclipse IDE: Utilized as the development environment for coding and testing.
4. JDBC (Java Database Connectivity): For interaction between the Java application and the MySQL database.

Code:

Mech\_Appointment Class

package mechanic;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.Statement;\*/

import java.util.Scanner;

public class Mech\_Appointment{

private static Scanner sc;

public static void main(String[] args)throws Exception{

sc = new Scanner(System.in);

int ch;

do {

System.out.println("^^^^^^^^^^^^^^^^ WELCOME ,YOU ARE NOW IN THE MAIN MENU ^^^^^^^^^^^^^");

System.out.println(" ^^^^^^^^^ SELECT ANY ONE OF THE FOLLOWING ^^^^^^^^^");

System.out.println(" 1.Customer ");

System.out.println(" 2.Mechanic ");

System.out.println(" 3.Appointment ");

System.out.println(" 0.Exit ");

customer\_menu cust = new customer\_menu();

ch=sc.nextInt();

switch(ch)

{

case 1:

int ch1;

System.out.println("^^^^^^^^^^^^^ CUSTOMER MENU ^^^^^^^^^^^^");

do {

System.out.println("^^^^^^ SELECT ANY ONE FROM THE FOLLOWING ^^^^^^");

System.out.println(" 1.Register a Customer ");

System.out.println(" 2.Modify Customer details ");

System.out.println(" 3.Delete Record of Customer ");

System.out.println(" 4.View Single Record ");

System.out.println(" 5.View all Records ");

System.out.println(" 0.Exit to Main Menu ");

ch1=sc.nextInt();

switch(ch1)

{

case 1:

cust.RegisterCustomer();

break;

case 2:

cust.ModifyCustomerDetails();

break;

case 3:

cust.DeleteCustomerRecord();

break;

case 4:

cust.ViewSingleRecord();

break;

case 5:

cust.ViewAllRecords();

break;

case 0:

break;

default :

System.out.println("Enter a valid key");

break;

}

}while(ch1 !=0);

break;

case 2:

int I2;

do {

System.out.println("^^^^^^^^ YOU ARE NOW IN MECHANIC MENU ^^^^^^^^");

System.out.println("^^^^ SELECT ANY ONE FROM THE FOLLOWING ^^^^");

System.out.println(" 1.View Single Record");

System.out.println(" 2.View all Records");

System.out.println(" 0.Exit to Main Menu");

mechanic\_menu mech = new mechanic\_menu();

I2=sc.nextInt();

switch(I2)

{

case 1:

mech.viewSingleRecord();

break;

case 2:

mech.viewAllRecords();

}

}while(I2 != 0);

break;

case 3:

int I3;

do {

System.out.println("^^^^^^^^ YOU ARE NOW IN APPOINTMENT MENU ^^^^^^^^");

System.out.println("^^^^ SELECT ANY ONE FROM THE FOLLOWING OPTIONS ^^^^");

System.out.println(" 1.Book an Appointment ");

System.out.println(" 2.Modify Appointment details ");

System.out.println(" 3.Delete an Appointment ");

System.out.println(" 4.View Single Record ");

System.out.println(" 5.View all Records ");

System.out.println(" 0.Exit to Main Menu ");

appointment\_menu app = new appointment\_menu();

I3=sc.nextInt();

switch(I3)

{

case 1:

app.BookAppointment();

break;

case 2:

app.ModifyAppointmentDetails();

break;

case 3:

app.DeleteAppointment();

break;

case 4:

app.ViewSingleRecord();

break;

case 5:

app.ViewAllRecords();

break;

case 0:

System.out.println("exiting from appintment menu");

break;

default:

System.out.println("enter a valid input");

break;

}

}while(I3!=0);

break;

case 0:

System.out.println("Thank You, please visit again.");

break;

}

}while(ch != 0);

}

}

customer\_menu Class

package mechanic;

/\*import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.Statement;\*/

import java.util.Scanner;

public class Mech\_Appointment{

private static Scanner sc;

public static void main(String[] args)throws Exception{

sc = new Scanner(System.in);

int ch;

do {

System.out.println("^^^^^^^^^^^^^^^^ WELCOME ,YOU ARE NOW IN THE MAIN MENU ^^^^^^^^^^^^^");

System.out.println(" ^^^^^^^^^ SELECT ANY ONE OF THE FOLLOWING ^^^^^^^^^");

System.out.println(" 1.Customer ");

System.out.println(" 2.Mechanic ");

System.out.println(" 3.Appointment ");

System.out.println(" 0.Exit ");

customer\_menu cust = new customer\_menu();

ch=sc.nextInt();

switch(ch)

{

case 1:

int ch1;

System.out.println("^^^^^^^^^^^^^ CUSTOMER MENU ^^^^^^^^^^^^");

do {

System.out.println("^^^^^^ SELECT ANY ONE FROM THE FOLLOWING ^^^^^^");

System.out.println(" 1.Register a Customer ");

System.out.println(" 2.Modify Customer details ");

System.out.println(" 3.Delete Record of Customer ");

System.out.println(" 4.View Single Record ");

System.out.println(" 5.View all Records ");

System.out.println(" 0.Exit to Main Menu ");

ch1=sc.nextInt();

switch(ch1)

{

case 1:

cust.RegisterCustomer();

break;

case 2:

cust.ModifyCustomerDetails();

break;

case 3:

cust.DeleteCustomerRecord();

break;

case 4:

cust.ViewSingleRecord();

break;

case 5:

cust.ViewAllRecords();

break;

case 0:

break;

default :

System.out.println("Enter a valid key");

break;

}

}while(ch1 !=0);

break;

case 2:

int I2;

do {

System.out.println("^^^^^^^^ YOU ARE NOW IN MECHANIC MENU ^^^^^^^^");

System.out.println("^^^^ SELECT ANY ONE FROM THE FOLLOWING ^^^^");

System.out.println(" 1.View Single Record");

System.out.println(" 2.View all Records");

System.out.println(" 0.Exit to Main Menu");

mechanic\_menu mech = new mechanic\_menu();

I2=sc.nextInt();

switch(I2)

{

case 1:

mech.viewSingleRecord();

break;

case 2:

mech.viewAllRecords();

}

}while(I2 != 0);

break;

case 3:

int I3;

do {

System.out.println("^^^^^^^^ YOU ARE NOW IN APPOINTMENT MENU ^^^^^^^^");

System.out.println("^^^^ SELECT ANY ONE FROM THE FOLLOWING OPTIONS ^^^^");

System.out.println(" 1.Book an Appointment ");

System.out.println(" 2.Modify Appointment details ");

System.out.println(" 3.Delete an Appointment ");

System.out.println(" 4.View Single Record ");

System.out.println(" 5.View all Records ");

System.out.println(" 0.Exit to Main Menu ");

appointment\_menu app = new appointment\_menu();

I3=sc.nextInt();

switch(I3)

{

case 1:

app.BookAppointment();

break;

case 2:

app.ModifyAppointmentDetails();

break;

case 3:

app.DeleteAppointment();

break;

case 4:

app.ViewSingleRecord();

break;

case 5:

app.ViewAllRecords();

break;

case 0:

System.out.println("exiting from appintment menu");

break;

default:

System.out.println("enter a valid input");

break;

}

}while(I3!=0);

break;

case 0:

System.out.println("Thank You, please visit again.");

break;

}

}while(ch != 0);

}

}

Mechanic\_menu Class

package mechanic;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.Statement;

import java.util.Scanner;

public class mechanic\_menu {

Scanner sc = new Scanner(System.***in***);

public void viewSingleRecord() {

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con4=DriverManager.*getConnection*

("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st4=con4.createStatement();

System.***out***.println("Enter mechanic id to print values:-");

int a4=sc.nextInt();

String selectQuery="select \* from mech where mech\_id= ?";

PreparedStatement preparedStatement=con4.prepareStatement(selectQuery);

preparedStatement.setInt(1, a4);

ResultSet resultSet = preparedStatement.executeQuery();

while (resultSet.next()) {

int mechId = resultSet.getInt("mech\_id");

String mechName = resultSet.getString("mech\_name");

String mechMobile=resultSet.getString("mech\_phn");

String mechEmail= resultSet.getString("mech\_email");

String mechTime=resultSet.getString("mech\_time");

String mechArea=resultSet.getString("mech\_exp");

System.***out***.println("Mechanic ID : " + mechId);

System.***out***.println("Mechanic Name : " + mechName);

System.***out***.println("Mechanic Mobile Number : " + mechMobile);

System.***out***.println("Mechanic email : "+ mechEmail);

System.***out***.println("Available Time : " + mechTime);

System.***out***.println("Area of expertise : " + mechArea);

}

st4.close();

con4.close();

resultSet.close();

preparedStatement.close();

} catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

}

}

public void viewAllRecords() {

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con5 = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/first", "root", "Nirmal@0602");

String selectQuery1 = "SELECT \* FROM mech";

PreparedStatement preparedStatement1 = con5.prepareStatement(selectQuery1);

ResultSet resultSet1 = preparedStatement1.executeQuery();

while (resultSet1.next()) {

int mechId = resultSet1.getInt("mech\_id");

String mechName = resultSet1.getString("mech\_name");

String mechMobile=resultSet1.getString("mech\_phn");

String mechEmail= resultSet1.getString("mech\_email");

String mechTime=resultSet1.getString("mech\_time");

String mechArea=resultSet1.getString("mech\_exp");

System.***out***.println("Mechanic ID : " + mechId);

System.***out***.println("Mechanic Name : " + mechName);

System.***out***.println("Mechanic Mobile Number : " + mechMobile);

System.***out***.println("Mechanic email : " + mechEmail);

System.***out***.println("Time availability : " + mechTime);

System.***out***.println("Area of expertise : " + mechArea);

System.***out***.println();

}

resultSet1.close();

preparedStatement1.close();

con5.close();

} catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

}

}

}

Appointment\_menu Class

package mechanic;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.Statement;

import java.util.Scanner;

public class appointment\_menu {

Scanner sc = new Scanner(System.***in***);

public void BookAppointment() {

System.***out***.println("^^^^ YOU ARE NOW BOOKING AN APPOINTMENT ^^^^");

System.***out***.println("Enter appointment id:-");

int a\_id=sc.nextInt();

System.***out***.println("Enter customer id");

int c\_id =sc.nextInt();

System.***out***.println("Enter mechanic id");

int m\_id= sc.nextInt();

System.***out***.println("Enter appointment date");

String a\_date=sc.next();

System.***out***.println("Enter appointment slot");

String a\_slot= sc.next();

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.*getConnection*

("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st=con.createStatement();

String insertQuery="insert into app values('"+a\_id+"','"+c\_id+"','"+m\_id+"','"+a\_date+"','"+a\_slot+"')";

int res=st.executeUpdate(insertQuery);

//System.out.println("hello world")

if(res==0)

{

System.***out***.println("Record not inserted");

}

else

{

System.***out***.println("Record inserted");

}

//ResultSet rs=st.executeQuery("select \* from customer");

st.close();

con.close();

} catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

}

}

public void ModifyAppointmentDetails() {

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

/\*Connection con4=DriverManager.getConnection("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st4=con4.createStatement();\*/

System.***out***.println("^^^^ YOU ARE NOW MODIFYING APPOINTMENT DETAILS ^^^^");

System.***out***.println("Enter the appointment id to update:-");

int a2=sc.nextInt();

int I7;

do {

System.***out***.println(" 1.Modify Customer ID");

System.***out***.println(" 2.Modify Mech ID");

System.***out***.println(" 3.Modify Appointment date");

System.***out***.println(" 4.Modify Appointment Slot");

System.***out***.println(" 0.EXIT to Appointment Menu");

I7=sc.nextInt();

String updateQuery = "";

switch(I7)

{

case 1:

Connection con1=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st1=con1.createStatement();

System.***out***.println(" YOU ARE NOW MODIFYING CUSTOMER ID");

System.***out***.println(" PLEASE ENTER CUSTOMER ID ");

int newname = sc.nextInt();

updateQuery = "UPDATE app SET cust\_id = '" + newname + "' WHERE app\_id = " + a2;

int res1=st1.executeUpdate(updateQuery);

if(res1==0)

{

System.***out***.println("Record not updated");

}

else

{

System.***out***.println("Record updated");

}

st1.close();

con1.close();

break;

case 2:

Connection con2=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st2=con2.createStatement();

System.***out***.println(" YOU ARE NOW MODIFYING MECHANIC ID");

System.***out***.println(" PLEASE ENTER THE NEW MECHANIC ID:");

int newveh = sc.nextInt();

updateQuery = "UPDATE app SET m\_id = '" + newveh + "' WHERE a\_id = " + a2;

int res2=st2.executeUpdate(updateQuery);

if(res2==0)

{

System.***out***.println("Record not updated");

}

else

{

System.***out***.println("Record updated");

}

st2.close();

con2.close();

break;

case 3:

Connection con3=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st3=con3.createStatement();

System.***out***.println(" YOU ARE NOW MODIFYING APPOINTMENT DATE");

System.***out***.println(" PLEASE ENTER THE NEW APPOINTMENT DATE:");

String newnum = sc.next();

updateQuery = "UPDATE app SET a\_date = '" + newnum + "' WHERE a\_id = " + a2;

int res3=st3.executeUpdate(updateQuery);

if(res3==0)

{

System.***out***.println("Record not updated");

}

else

{

System.***out***.println("Record updated");

}

st3.close();

con3.close();

break;

case 4:

Connection con4=DriverManager.*getConnection*("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st4=con4.createStatement();

System.***out***.println(" YOU ARE NOW MODIFYING APPOINTMENT SLOT");

System.***out***.println(" PLEASE ENTER THE NEW SLOT:");

String newadd = sc.next();

updateQuery = "UPDATE app SET a\_slot = '" + newadd + "' WHERE a\_id = " + a2;

int res4=st4.executeUpdate(updateQuery);

if(res4==0)

{

System.***out***.println("Record not updated");

}

else

{

System.***out***.println("Record updated");

}

st4.close();

con4.close();

break;

case 0:

System.***out***.println(" YOU ARE NOW EXITING APPOINTMENT MODIFYING MENU. ");

break;

default:

System.***out***.println(" Invalid input.Please enter valid key");

break;

}

}while(I7!=0);

}catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

}

}

public void DeleteAppointment() {

System.***out***.println("^^^^ YOU ARE NOW DELETING AN APPOINTMENT ^^^^");

System.***out***.println(" DO YOU REALLY WANT TO DELETE ?");

System.***out***.println(" PRESS 1 TO DELETE ");

System.***out***.println("PRESS ANY OTHER KEY TO CANCEL");

int S= sc.nextInt();

if(S == 1)

{

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con2=DriverManager.*getConnection*

("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st2=con2.createStatement();

System.***out***.println("Enter appointment id to delete:-");

int a=sc.nextInt();

String deleteQuery="delete from app where a\_id= '"+a+"'";

int res2=st2.executeUpdate(deleteQuery);

//System.out.println("hello world")

if(res2==0)

{

System.***out***.println("Record not deleted");

}

else

{

System.***out***.println("Record deleted");

}

//ResultSet rs=st.executeQuery("select \* from customer");

st2.close();

con2.close();

}catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

}

}

else

{

}

}

public void ViewSingleRecord() {

System.***out***.println("YOU ARE NOW PRINTING DETAILS OF AN APPOINTMENT ");

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con4=DriverManager.*getConnection*

("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

Statement st4=con4.createStatement();

System.***out***.println("Enter appointment id to print values:-");

int a4=sc.nextInt();

String selectQuery="select \* from app where a\_id= ?";

PreparedStatement preparedStatement=con4.prepareStatement(selectQuery);

preparedStatement.setInt(1, a4);

ResultSet resultSet = preparedStatement.executeQuery();

while (resultSet.next()) {

int appId = resultSet.getInt("a\_id");

int custId = resultSet.getInt("\_id");

int mechId = resultSet.getInt("m\_id");

String appDate= resultSet.getString("a\_date");

String appSlot=resultSet.getString("a\_slot");

System.***out***.println("Appointment ID: " + appId);

System.***out***.println("Customer ID: " + custId);

System.***out***.println(" mechanic ID: " + mechId);

System.***out***.println("appointment date:"+appDate);

System.***out***.println("appointment slot: " + appSlot);

}

st4.close();

con4.close();

resultSet.close();

preparedStatement.close();

}catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

}

}

public void ViewAllRecords() {

try {

Class.*forName*("com.mysql.cj.jdbc.Driver");

Connection con5 = DriverManager.*getConnection*("jdbc:mysql://localhost:3306/first", "root","Nirmal@0602");

String selectQuery1 = "SELECT \* FROM app";

PreparedStatement preparedStatement1 = con5.prepareStatement(selectQuery1);

ResultSet resultSet1 = preparedStatement1.executeQuery();

while (resultSet1.next()) {

int appId = resultSet1.getInt("a\_id");

int custId = resultSet1.getInt("c\_id");

int mechId = resultSet1.getInt("m\_id");

String appDate= resultSet1.getString("a\_date");

String appSlot=resultSet1.getString("a\_slot");

System.***out***.println("Appointment ID: " + appId);

System.***out***.println("Customer ID: " + custId);

System.***out***.println("mechanic ID: " + mechId);

System.***out***.println("appointment date: "+appDate);

System.***out***.println("appointment slot: " + appSlot);

System.***out***.println();

}

resultSet1.close();

preparedStatement1.close();

con5.close();

}catch (Exception e) {

System.***out***.println("An error occurred: " + e.getMessage());

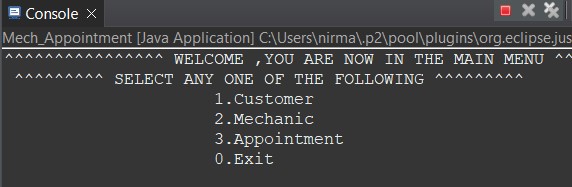
}

}

}

Output from the Console:

Main Menu:



Customer menu:

A screenshot of a computer

Description automatically generated

Appointment menu:

A black screen with white text

Description automatically generated

Mechanic Menu:

A black screen with white text

Description automatically generated