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/*
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Task 1-Online Reservation System.
Oasis Infobyte Task 1
 */

package Task1;
import java.sql.*;
import java.util.Scanner;
import java.util.Random;

public class task1Oasis {
   private static final int min = 1000;
   private static final int max = 9999;

   public static class user {
      private String user;
      private String password;

      Scanner sc = new Scanner(System.in);

      public user() {
      }

      public String getUsername() {
         System.out.println("Enter Username : ");
         user = sc.nextLine();
         return user;
      }

      public String pass() {
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        System.out.println("Enter Password : ");
        password = sc.nextLine();
        return password;
    }
}

public static class PnrRecord {
    private int pnrNumber;
    private String passengerName;
    private String trainNumber;
    private String classType;
    private String journeyDate;
    private String from;
    private String to;

    Scanner sc = new Scanner(System.in);

    public int getpnrNumber() {
        Random random = new Random();
        pnrNumber = random.nextInt(max) + min;
        return pnrNumber;
    }

    public String getPassengerName() {
        System.out.println("Enter the passenger name : ");
        passengerName = sc.nextLine();
        return passengerName;
    }

    public String gettrainNumber() {
        System.out.println("Enter the train number : ");
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        trainNumber = sc.nextLine();
        return trainNumber;
    }

    public String getclassType() {
        System.out.println("Enter the class type : ");
        classType = sc.nextLine();
        return classType;
    }

    public String getjourneyDate() {
        System.out.println("Enter the Journey date as 'YYYY-MM-DD' format");
        journeyDate = sc.nextLine();
        return journeyDate;
    }

    public String getfrom() {
        System.out.println("Enter the starting place : ");
        from = sc.nextLine();
        return from;
    }

    public String getto() {
        System.out.println("Enter the destination place :  ");
        to = sc.nextLine();
        return to;
    }
}

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
```

```
user u1 = new user();
String username = u1.getUsername();
String password = u1.pass();

 String url = "jdbc:mysql://localhost:3306/railwayReservation";

try {
   Class.forName("com.mysql.jdbc.Driver");

   try (Connection connection = DriverManager.getConnection(url, username, password)) {
      System.out.println("User Connection Granted.\n");
      while (true) {
         String InsertQuery = "insert into reservations values (?, ?, ?, ?, ?, ?, ?)";
         String DeleteQuery = "DELETE FROM reservations WHERE pnr_number = ?";
         String ShowQuery = "Select * from reservations";

         System.out.println("Enter the choice : ");
         System.out.println("1. Make Reservation.\n");
         System.out.println("2. Cancel Reservation.\n");
         System.out.println("3. Show All Records.\n");
         System.out.println("4. Exit.\n");
         int choice = sc.nextInt();

         if (choice == 1) {

            PnrRecord p1 = new PnrRecord();
            int pnr_number = p1.getpnrNumber();
            String passengerName = p1.getPassengerName();
            String trainNumber = p1.gettrainNumber();
            String classType = p1.getclassType();
            String journeyDate = p1.getjourneyDate();
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                String getfrom = p1.getfrom();
                String getto = p1.getto();

                try (PreparedStatement preparedStatement =
connection.prepareStatement(InsertQuery)) {
                    preparedStatement.setInt(1, pnr_number);
                    preparedStatement.setString(2, passengerName);
                    preparedStatement.setString(3, trainNumber);
                    preparedStatement.setString(4, classType);
                    preparedStatement.setString(5, journeyDate);
                    preparedStatement.setString(6, getfrom);
                    preparedStatement.setString(7, getto);

                    int rowsAffected = preparedStatement.executeUpdate();
                    if (rowsAffected > 0) {
                        System.out.println("Record added successfully.");
                    }

                    else {
                        System.out.println("No records were added.");
                    }
                }

                catch (SQLException e) {
                    System.err.println("SQLException: " + e.getMessage());
                }

            }

            else if (choice == 2) {
                System.out.println("Enter the PNR number to delete the record : ");
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```
                int pnrNumber = sc.nextInt();
                try (PreparedStatement preparedStatement =
connection.prepareStatement(DeleteQuery)) {
                    preparedStatement.setInt(1, pnrNumber);
                    int rowsAffected = preparedStatement.executeUpdate();

                    if (rowsAffected > 0) {
                        System.out.println("Record deleted successfully.");
                    }

                    else {
                        System.out.println("No records were deleted.");
                    }
                }

                catch (SQLException e) {
                    System.err.println("SQLException: " + e.getMessage());
                }
            }

            else if (choice == 3) {
                try (PreparedStatement preparedStatement =
connection.prepareStatement(ShowQuery);
                        ResultSet resultSet = preparedStatement.executeQuery()) {
                    System.out.println("\nAll records printing.\n");
                    while (resultSet.next()) {
                        String pnrNumber = resultSet.getString("pnr_number");
                        String passengerName = resultSet.getString("passenger_name");
                        String trainNumber = resultSet.getString("train_number");
                        String classType = resultSet.getString("class_type");
                        String journeyDate = resultSet.getString("journey_date");
                        String fromLocation = resultSet.getString("from_location");
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                String toLocation = resultSet.getString("to_location");

                System.out.println("PNR Number: " + pnrNumber);
                System.out.println("Passenger Name: " + passengerName);
                System.out.println("Train Number: " + trainNumber);
                System.out.println("Class Type: " + classType);
                System.out.println("Journey Date: " + journeyDate);
                System.out.println("From Location: " + fromLocation);
                System.out.println("To Location: " + toLocation);
                System.out.println("----------");
            }
        } catch (SQLException e) {
            System.err.println("SQLException: " + e.getMessage());
        }
    }

    else if (choice == 4) {
        System.out.println("Exiting the program.\n");
        break;
    }

    else {
        System.out.println("Invalid Choice Entered.\n");
    }
  }

}

catch (SQLException e) {
  System.err.println("SQLException: " + e.getMessage());
}
```

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        }

        catch (ClassNotFoundException e) {
            System.err.println("Error loading JDBC driver: " + e.getMessage());
        }

        sc.close();
    }
}
```