PROJECT REPORT

TOURISM DESKTOP APPLICATION

GROUP 7 - EQUIPO

Introduction

Sri Lanka's tourism sector plays a significant role in the island's economy, accounting for 12% of the nation's GDP. It is third largest source of foreign exchange and provides vital revenue of Sri Lanka.

Therefore, constant attention should be given to the difficulties and problems arising in this sector.

At present, with current situation in the country, efforts are being made to build the tourism industry in the country. But it seems that there are some shortcomings and obstacles in it.

Problem Identification

Tourists may have difficulties in obtaining the necessary transport facilities to reach their tourist destinations and difficulties in finding suitable safe accommodation to stay in tourist areas.

Solution with Our Application

Before Arrival,

Provide an opportunity to select travel packages

- After login to the application, user can go to packages section and choose a
 package with places which he wishes to travel. Then he can book a package after
 filling details.
- Can book an accommodation to stay in travel area.
 - User can go to hotels section and check hotels information. Then he can book a hotel after filling details.
- Provide different vehicle choices to make a reservation for the travel period.
 - User can go to the vehicles section and check information about vehicle. Then he can book a vehicle after filling details.

Easy to make changes with own booking details

 User can go to relevant booking details and make changes or cancel the reservations.

Used java packages

Java.sql.Connection

Enables java applications to connect to and communicate with relational databases through classes and interfaces.

2) Java.sql.DriverManager

Responsible for managing JDBC drivers and establishing databases.

3) Java.sql.ResultSet

Used to represent a set of results from a database query.

4) Java.sql.Statement

Used to execute SQL statements and interact with a database. It provides statements to execute SQL queries, updates and retrieve result sets.

5) Java.sql.SQLException

Used to handle exceptions that occurs during database operations.

6) Javax.swing.JoptionPane

Container component in java swing that is used to organize and group other components.

7) Java.awt.Color

Used to encapsulate colors in the default's RGB color space or color in arbitrary color spaces identified by a color space.

Imported Libraries

1) mysql-connector-j-8.0.33.jar Official JDBC driver for mysql.

2) jcalender-1.4.jar

Java date chooser bean for graphically picking a date.

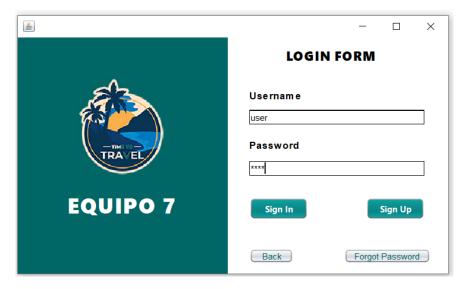
3) rs2xml.jar

Used to display the date in a table format.

Customer Interfaces



- User or admin open the app, this page will appear first.
- After clicking the user button, the user login form will open and after clicking admin button, the admin login form will open.



Sign In ->

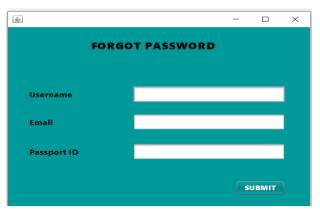
- User click Sign In button after user enter username and password.
- The system will check with the database to see if the username and password match.
- If it is correct system will open user dashboard and else display the error message.

Back ->

• The user login form closes and the login page opens.

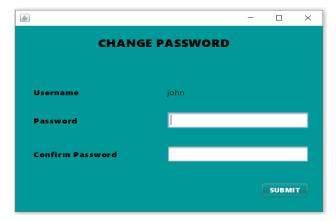
Forgot Password ->

- It may also provide options for password recovery when you forgot your password.
- Forgot Password page will open after click tis button.



SUBMIT->

- The system checks whether there is a record in the database related to the details filled by the user.
- If the email and passport id match the respective username, the change password page will be opened.
- If not, an error message will be displayed.

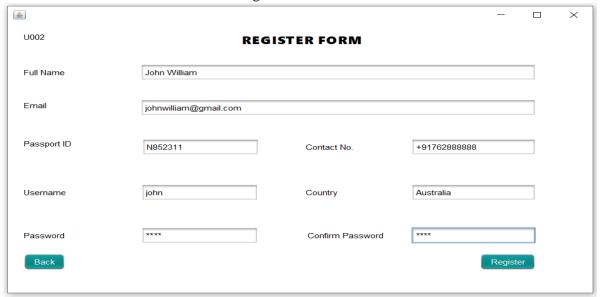


SUBMIT->

- The system checks whether the password field and the confirm password field both have the same password entered.
- If it is same, the password will be changed according to that username.
- If not, the system will display error messages.

Sign Up->

• If the user has not registered before, the user can make his own account using the user register page. For that users have to enter the details to the given fields.



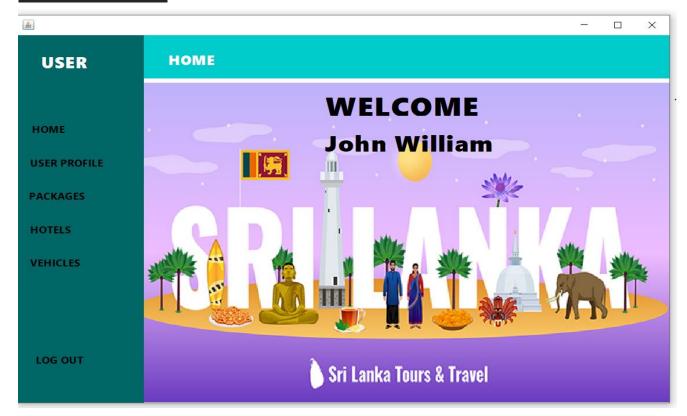
Register->

- The code checks if the fields are empty.
- And also checks whether the password field and the confirm password field both have the same password entered.
- If any of these validations fail, the system will display error messages.
- If all the details are filled out successfully, the record will be sent to the database, and a confirmation message will be displayed.

Back ->

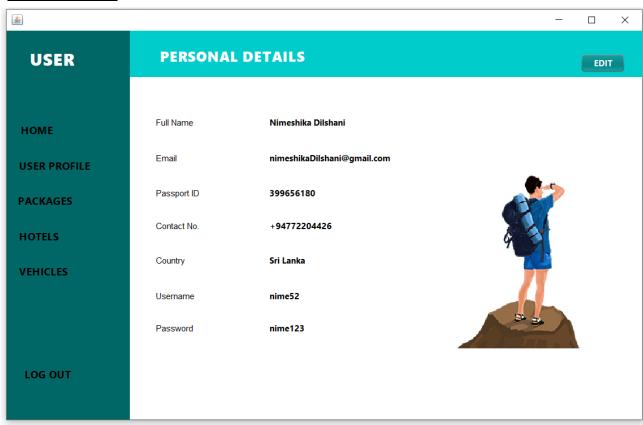
The user Register form closes and the user login page opens.

User Dashboard



- After the sign in system will display a user dashboard's Home.
- The user's full name is displayed on the home page.

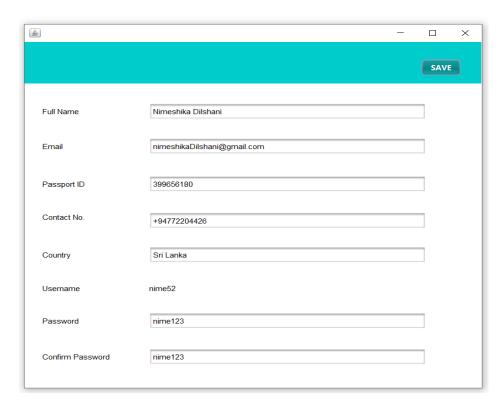
User Profile



• If the user clicks on the user profile our system will display all the details of the user who entered for the register. Here we retrieve data from "userregister" table in the database and display it here.

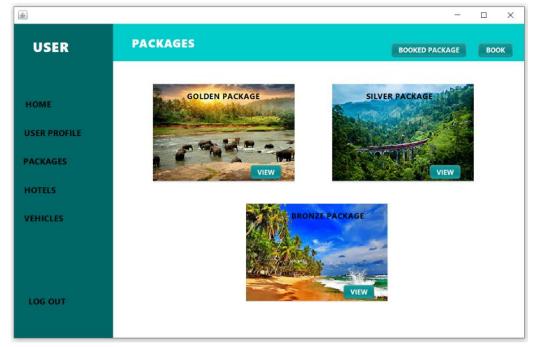
The function of **EDIT** button

If the user wants to edit that entered details click the EDIT button and it will display the following interface.



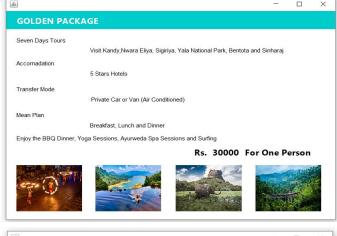
• Then we can edit details and it will update the database when we click the SAVE button. And also, it displays a message dialog box.

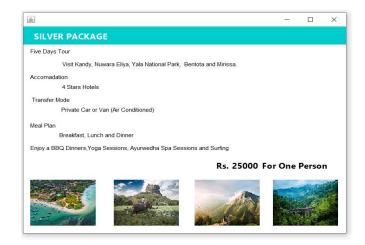
Packages

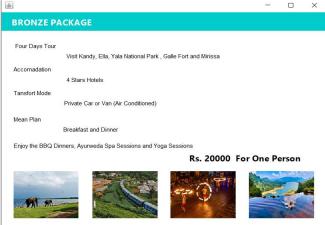


- If the customer clicks on the Packages our system will display the three packages.
- User can click the view button and see the details of those packages.

VIEW->



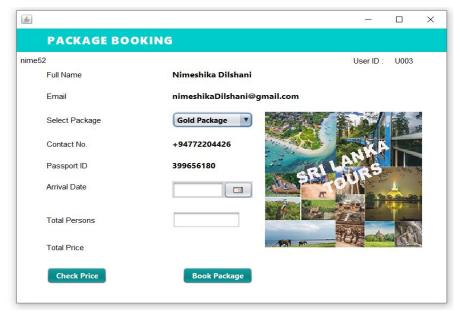




• Admin can change the prices and details of these packages.

BOOK->

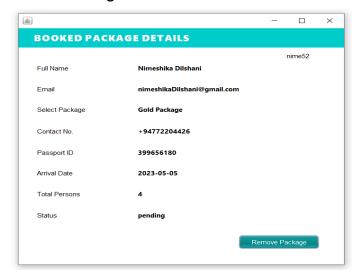
• It is for booking the package, when customer click that it displays the following interface



- Full name, Email, Contact No, Passport-Id are auto filled.
- After filling arrival date and total persons, you can check the price and book the package.
- If not filled some field, display message some fields are empty.
- Customer can only book one package. If he tries to book more than one package, an error message will appear.
- If all the details are filled out successfully, the record will be sent to the database, and a confirmation

message will be displayed.

Booked Package->

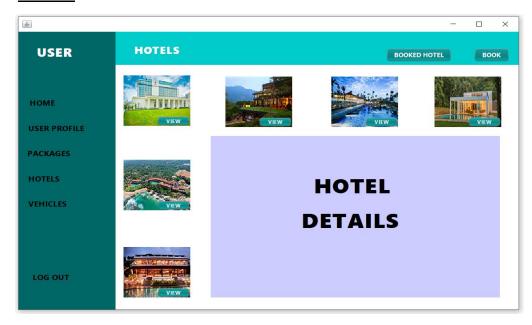


• When the customer clicks the Booked Package button, The details of the package booked by the customer are displaying.

Remove Package->

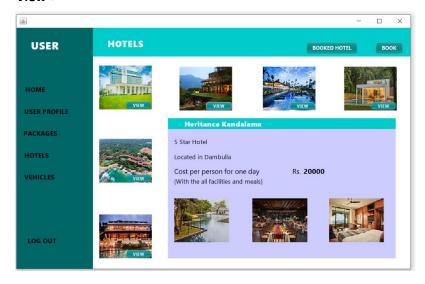
• If customer want to delete package, he/she can click the Remove Package button, then booked package is removed in database.

Hotels



- If the customer clicks on the **HOTELS**, system will display the hotels.
- Customer can click the view buttons and see the details of those hotels in Hotel Details area.

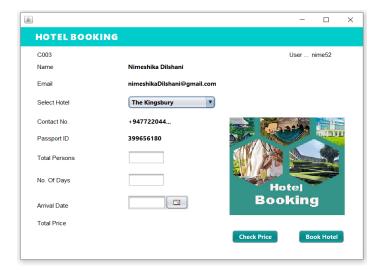
View->



• Admin can change the prices and details of these hotels.

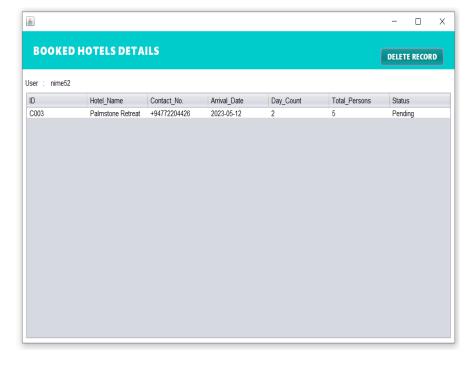
BOOK ->

• It is for booking the Hotels, when customer click that it displays the following interface.



- Full name, Email, Contact No, Passport-Id are auto filled.
- After filling arrival date and total persons and no. of days you can check the price and book the hotel.
- If not filled some field, display message some fields are empty.
- If all the details are filled out successfully, the record will be sent to the database, and a confirmation message will be displayed.

BOOKED HOTEL->

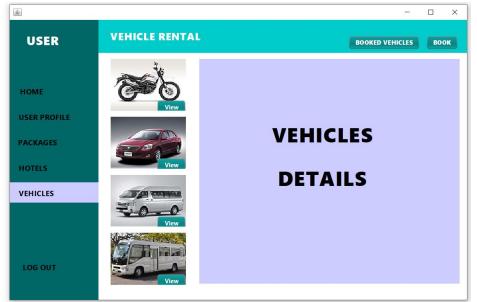


- When the customer clicks the BOOKED HOTEL button, The details of the hotels booked by the customer are displaying.
- The status column of this is shown as pending when the customer booking is entered. After the admin checks it and accepts the booking, it shows accept here.

DELETE RECORD->

• If customer want to delete booked hotel, select record and he/she can click the DELETE RECORD button, then booked hotel is removed in database and table.

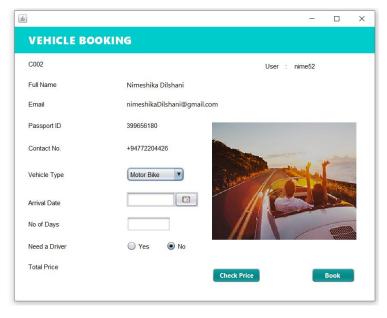
Vehicles



- If you want to book a vehicle, click vehicle button. There is button called view to show more information about vehicle booking.
- Here we used 5 panels and did set visible (true) according to the mouse click.
- And also, there are two buttons book vehicle and booked vehicle.

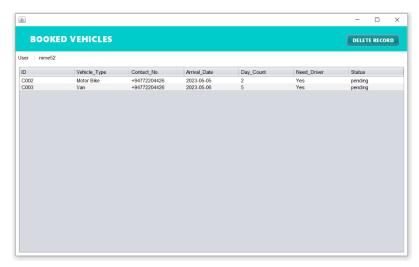
BOOK->

• It is for booking the vehicle, when we click that it displays the following interface.



- for the full name, Email, passport id, and contact no we used textfield, for selecting vehicle type used a drop-down list and for select for the arrival date we used JCalender in jframe form.
- After we enter details by clicking the check price button, we can call the function to display the total price.
- When you book those details save them on the database and display a message for the successful booking.

Booked Vehicles->



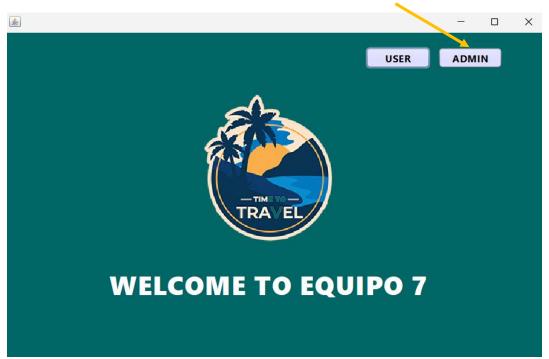
- When the user clicks the **Booked Vehicle** button, retrieve all saved booking data from the database and display it in a table using jTable in Swing.
- If you want to delete those recorded orders there is a button called **Delete Record** using SQL queries and shows a successful delete message also.
- ❖ If you want to log out the user dashboard, click on log out. Then the user dashboard will leave and go to the login page.



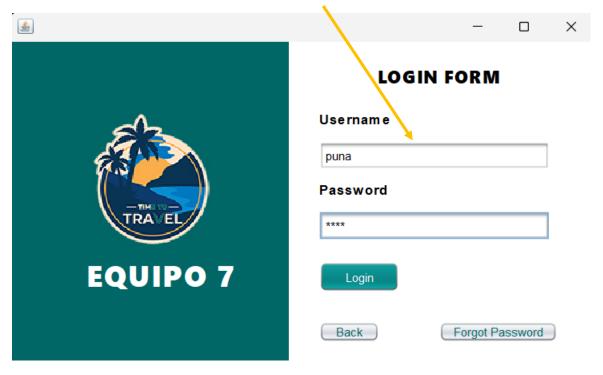
Admin Interface

01)Logging to admin profile

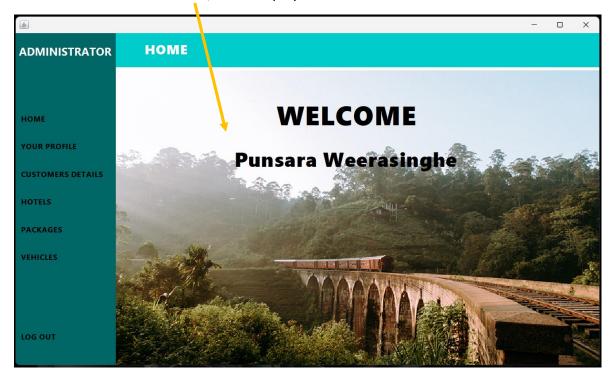
Click the ADMIN button then it will display the logging form.



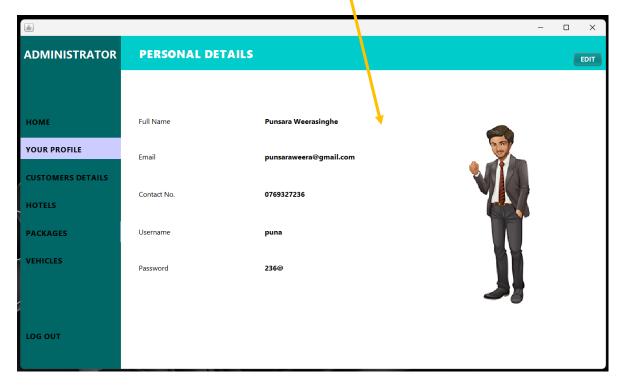
Enter Username & Password to log in to admin profile.



After the click LOGING button, it will display an admin dashboard.

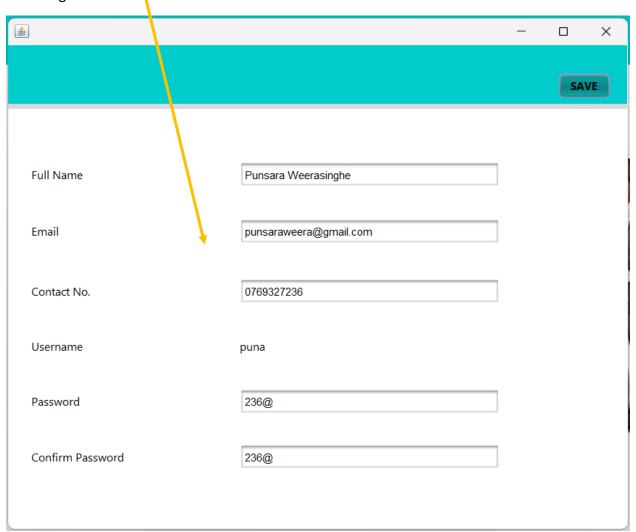


If the admin clicks on the YOUR PROFILE, our system will display all the personal details of the admin.



Click the **EDIT** button.

If the user wants to edit that entered details, click the EDIT button and it will display the following interface.

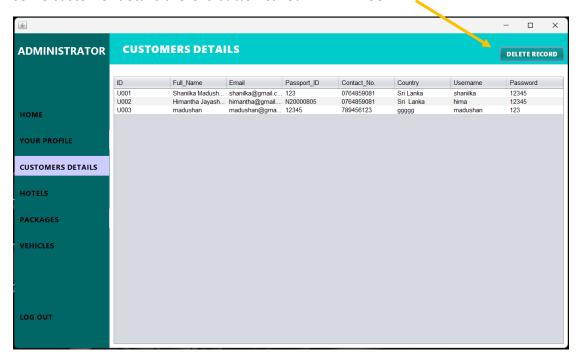


Then we can edit details and it will update the database when we click the SAVE button. And, it displays a message dialog box like this.



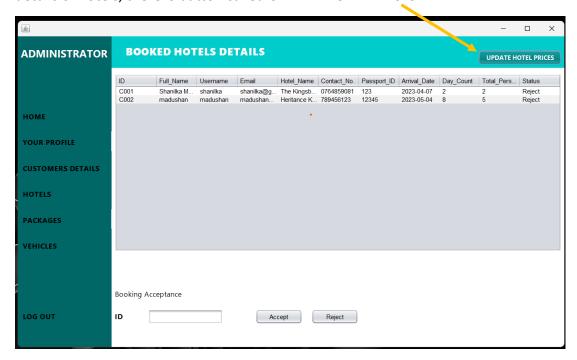
02)Customer Details

If you want to look customer details, click CUSTOMER DETAILS button and if you want to delete some customer details there is button called DELET RECORD.

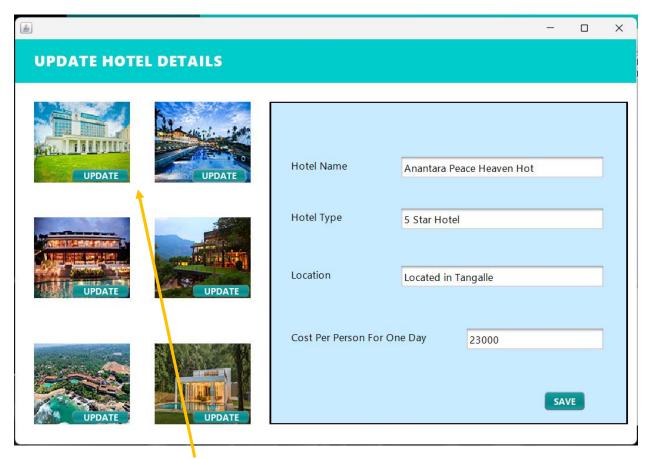


03)Hotels Details

If you want to look hotel booking request details click HOTELS button and if you want to update details of hotels, there is button called UPDATE HOTEL PRICES.



UPDATE HOTEL DETAILS



If the admin wants to update that entered hotels details, click the UPDATE button and it will display the above interface.

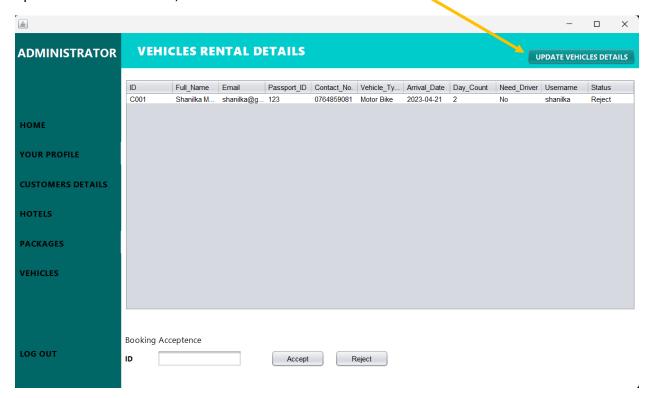
Accepted Hotel Booking details.



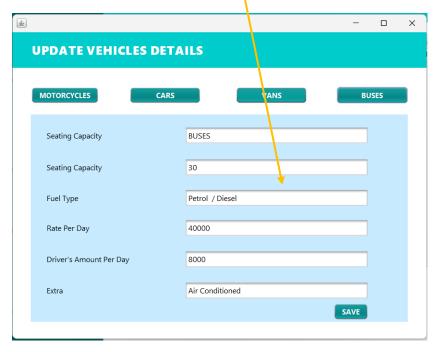
Admin can reject / accept the hotels booking requests. After admin enter the Customer id in ID text area and clicking the ACCEPT / REJECT button, then update the STATUS column in Booked hotel details table.

04) Vehicle Details

If you want to look hotel booking request details click VEHICLE button and if you want to update details of hotels, there is button called UPDATE VEHICLE DETAILS.



If the admin wants to update that entered hotels details, click the UPDATE button and it will display the following interface.

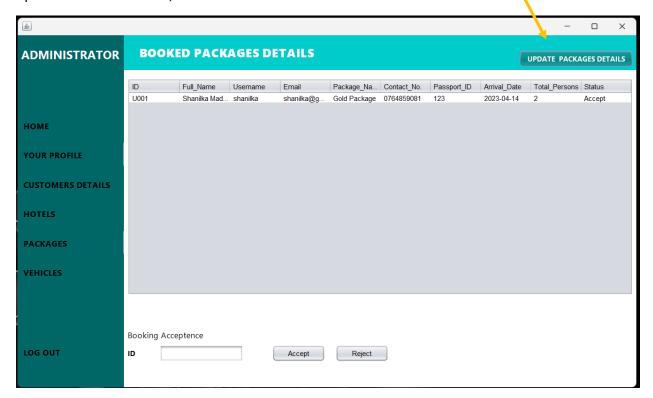


Admin can reject / accept the vehicle booking requests. After admin enter the Customer id in ID text area and clicking the ACCEPT / REJECT button, then update the STATUS column in Booked vehicle details table.



05)Package Details

If you want to look hotel booking request details click PACKAGES button and if you want to update details of hotels, there is button called UPDATE PACKAGES DETAILS.

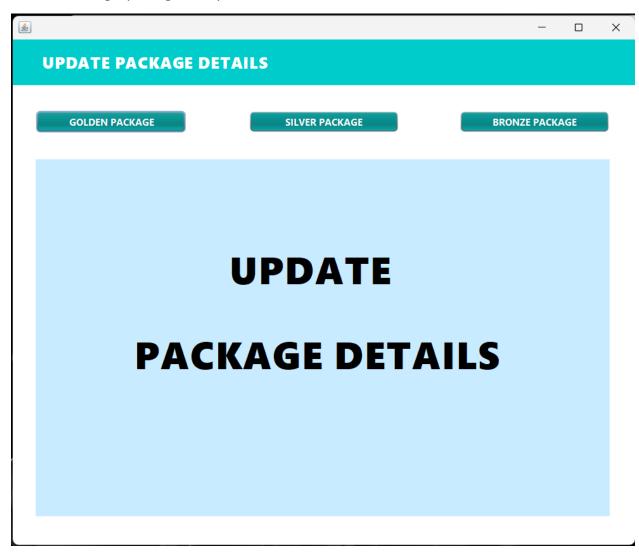


Admin can reject / accept the package booking requests. After admin enter the Customer id in ID text area and clicking the ACCEPT / REJECT button, then update the STATUS column in Booked Package details table.

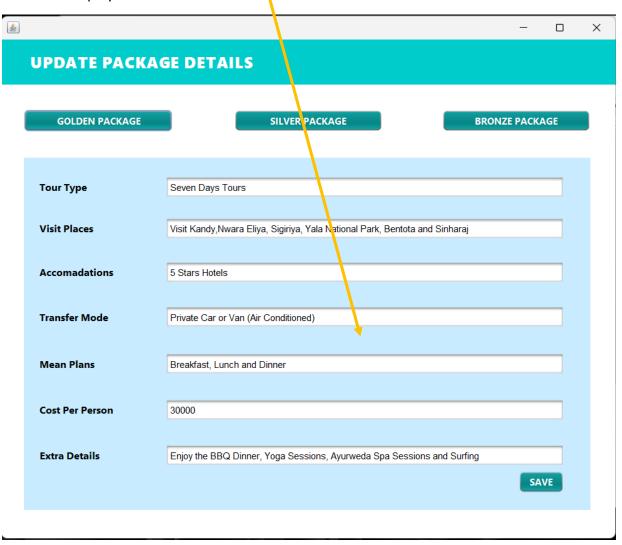


Update packages details.

We introducing 3 packages, they are Golden, Silver and Bronze.



If the admin wants to update that entered package details, click the package vise name button and it will display the below interface.



How Users can achieve their applications through the application

To provide easy use application for the tourists

Users can use this <u>application</u> to find hotels situated in certain area, they can book hotels and also, they can rent vehicles using the system.

• To provide support for admins to store valuable information.

Admins can store customer details, booking details and vehicle rent details through the application.

To provide flexibility by adapts customer changes

System is adapted to the changes made by users.

Object Oriented programming concepts implemented in our Application

We used swing API and NetBeans IDE to develop our Application

• Class and Object Creation:

The javax.swing.JFrame class is used to extend the class. This class represents a GUI form. This code creates instances of the classes.

• Constructors and methods:

Constructors have the same name as the class and don't have a return type.

• initComponents() method is responsible for initializing and setting up the GUI components, such as buttons, labels, text fields, etc., on the USERLOGIN form.

```
Example :
    public USERLOGIN() {
        initComponents();
}
```

• Inheritance:

Classes extend the javax.swing.JFrame class, inheriting its properties and behaviors. This is an example of inheritance, where a subclass inherits from a superclass (JFrame).

Example:

public class USERLOGIN extends javax.swing.JFrame

• Encapsulation:

The code includes details of a class' implementation in its own class declaration. The class declares the variables, methods, and GUI elements, and access modifiers are used to regulate their visibility and accessibility.

Example:

public static Connection dbConnect();

• Polymorphism:

The invokeLater() function call shows polymorphism in the code. It takes a Runnable interface instance, which is implemented by a new Runnable() method on an anonymous inner class. This enables the flexibility of passing several Runnable interface implementations.

Example:

```
java.awt.EventQueue.invokeLater(new Runnable() {
    public void run() {
        new USERLOGIN().setVisible(true);
    }
```

• Exception Handling:

The code includes try-catch blocks to handle important exceptions like ClassNotFoundException and SQLException.

Example:

```
}catch (SQLException ex) {
```

Logger.getLogger(USERLOGIN.class.getName()).log(Level.SEVERE, null, ex);

Database Connectivity

<u>DBconnect.java</u> class is created and drive_class, url, username, password are declared as private variables.

• Loading the JDBC Driver:

```
Class.forName("com.mysql.jdbc.Driver");
```

is used to load the MySQL JDBC driver class. This step is required to register the driver with the DriverManager before establishing a database connection.

• Establishing a Connection:

```
DriverManager.getConnection(...);
```

is used to establish a connection to the MySQL database. It takes the database URL (jdbc:mysql://localhost:3306/travel_management), username (root), and password ("") as parameters. This method returns a Connection object that represents the connection to the database.

• Preparing a Statement:

```
String sql = "select * from adminlogin";
```

```
con.PrepareStatement(sql);
```

is used to create a Statement object. The Statement object allows you to execute SQL statements and interact with the database.

• Executing an SQL Statement:

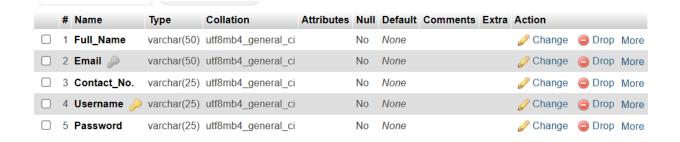
```
ptst.executeUpdate(sql);
ptst.executeQuery();
are used to execute an SQL statement.
```

Database and Tables Structures

We used the xampp web server and phpmyadmin database management tool to create this database. Database consists of eight tables.

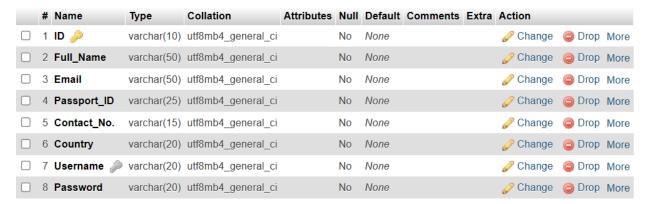
• adminlogin table structure

Username field is the primary key field.



userregister table structure

The ID field is the primary key and it is set to auto increment.



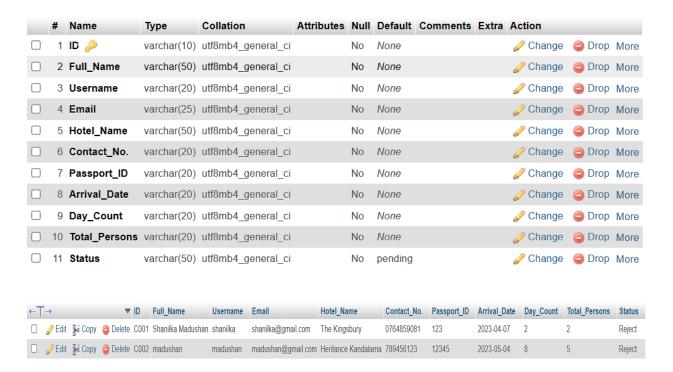
hoteldetails table structure

hotel_ID is the primary key field.



hotelbooking table structure

The ID field is the primary key.



packagedetails table structure

The Package_Name field is the primary key.



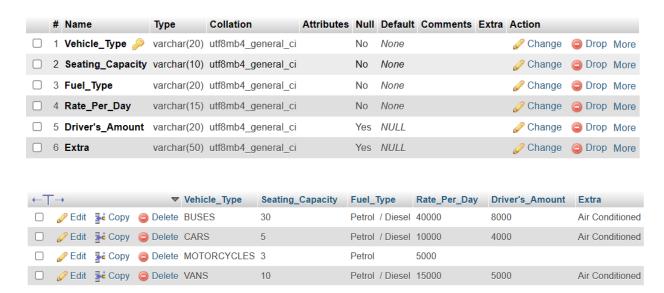
packagebooking table structure

The ID field is the primary key.



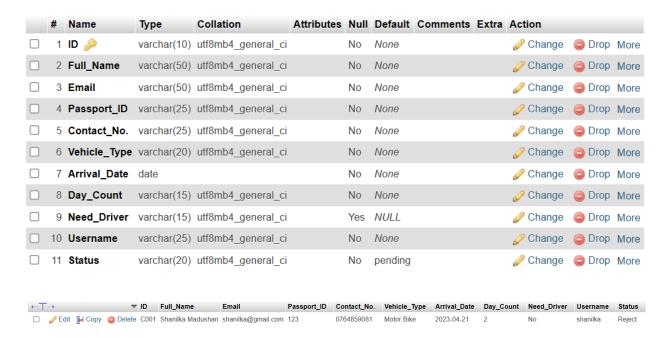
vehiclesdetails table structure

The Vehicle_Type field is the primary key.



vehiclebooking table structure

The ID field is the primary key.



Group Members

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