PROJECT REPORT

Project Title: **TOURIST AGENCY**

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This report shows important parts of the project using pictures and short explanations. The pictures highlight key moments, how things look, and the results. The short explanations add more details to make things clear.

- **First Requirement for the front end:**

<u>Front End requirement using SWING</u>: **(2 separate GUI required Screen shots)**

1. Need a screen to register in a hotel and their available rooms and date, time etc.., using swing java code.

Here is the screen to register in a hotel:

● ● ●	Vietnam Hotel Booking			
Name	**Available Room**	**Available Date**	**Rating**	**Price Per Day**
Hanoi Grand Hotel	Deluxe Room	2023-12-01	4.5	120.0
Hanoi Grand Hotel	Superior Room	2023-12-01	4.5	100.0
Hanoi Grand Hotel	Standard Room	2023-12-02	4.5	80.0
Da Nang Beach Resort	Sea View Villa	2023-12-01	4.3	200.0
Da Nang Beach Resort	Poolside Suite	2023-12-01	4.3	180.0
Da Nang Beach Resort	Family Room	2023-12-02	4.3	90.0
Saigon Skyline Suites	Executive Suite	2023-12-02	4.8	250.0
Saigon Skyline Suites	Deluxe Apartment	2023-12-02	4.8	300.0
Saigon Skyline Suites	Standard Studio	2023-12-03	4.8	120.0
Ho Chi Minh City Oasis	Standard Room	2023-12-02	4.2	100.0
Ho Chi Minh City Oasis	Economy Room	2023-12-03	4.2	80.0
Halong Bay Luxury Retreat	Luxury Cabin	2023-12-03	4.7	300.0
Halong Bay Luxury Retreat	Premium Suite	2023-12-03	4.7	900.0
Halong Bay Luxury Retreat	Classic Room	2023-12-04	4.7	90.0
Hue Riverside Resort	River View Bungalow	2023-12-05	4.6	150.0
Hue Riverside Resort	Garden Cottage	2023-12-06	4.6	70.0

Customer Name: [   ]   Duration (days): [   ]   ☐ Paid   [Book Hotel]

P/s: It contains the Hotel information fetched from the Hotel table, the customer needs to input their name, duration of staying and paid or not.

- **Second requirement for the front end:**

2. Try to book the hotel and show notification as "Booked successfully" and update the list in the database after booking, through the swing java code.

This is the screenshot of attempt trying to book a hotel:

Name	Available Room	Available Date	Rating	Price Per Day
Hanoi Grand Hotel	Deluxe Room	2023–12–01	4.5	120.0
Hanoi Grand Hotel	Superior Room	2023–12–01	4.5	100.0
Hanoi Grand Hotel	Standard Room	2023–12–02	4.5	
Da Nang Beach Resort	Sea View Villa	2023–12–01	4.3	
Da Nang Beach Resort	Poolside Suite	2023–12–01	4.3	
Da Nang Beach Resort	Family Room	2023–12–02	4.3	
Saigon Skyline Suites	Executive Suite	2023–12–02	4.8	
Saigon Skyline Suites	Deluxe Apartment	2023–12–02	4.8	
Saigon Skyline Suites	Standard Studio	2023–12–03	4.8	
Ho Chi Minh City Oasis	Standard Room	2023–12–02	4.2	
Ho Chi Minh City Oasis	Economy Room	2023–12–03	4.2	
Halong Bay Luxury Retreat	Luxury Cabin	2023–12–03	4.7	
Halong Bay Luxury Retreat	Premium Suite	2023–12–03	4.7	
Halong Bay Luxury Retreat	Classic Room	2023–12–04	4.7	90.0
Hue Riverside Resort	River View Bungalow	2023–12–05	4.6	150.0
Hue Riverside Resort	Garden Cottage	2023–12–06	4.6	70.0

Message

Booking successful!

OK

Customer Name: Nguyen Duc Tin   Duration (days): 15   ✓ Paid   Book Hotel

Vietnam Hotel Booking

Below is the updated customer list being circled in red color in the Hotel table in Mysql:

name	hotel_name	room	booking_date	duration	paid
Kim Anh	Saigon Skyline Suites	Deluxe Apartment	2023-12-01	3	0
Le Minh Quan	Saigon Skyline Suites	Standard Studio	2023-12-02	4	1
Le Thi Phuong Anh	Hanoi Grand Hotel	Superior Room	2023-12-03	2	0
Nguyen Duc Tin	Hue Riverside Resort	River View Bungalow	2023-12-05	15	1
Nguyen Huu Thanh	Ho Chi Minh City Oasis	Economy Room	2023-12-03	2	1
Nguyen Thanh Tung	Halong Bay Luxury Retr…	Luxury Cabin	2023-12-05	2	1
Nguyen Thi Lan	Da Nang Beach Resort	Poolside Suite	2023-12-01	2	0
Nguyen Van Hieu	Saigon Skyline Suites	Executive Suite	2023-12-01	5	1
Nguyen Van Hoang	Saigon Skyline Suites	Family Room	2023-12-02	4	1
Nguyen Van Khanh	Halong Bay Luxury Retr…	Classic Room	2023-12-04	3	1
Pham Thanh Huyen	Halong Bay Luxury Retr…	Premium Suite	2023-12-03	5	0
Tran Nhat Linh	Hue Riverside Resort	River View Bungalow	2023-12-04	3	0
Tran Thi My Linh	Hue Riverside Resort	Garden Cottage	2023-12-05	4	0
Tran Thi Thuy Linh	Da Nang Beach Resort	Sea View Villa	2023-12-01	2	0
Tran Van Long	Ho Chi Minh City Oasis	Standard Room	2004-10-10	3	1

- **Frist CSV requirement:**

3. Filter and display **the hotels** that has high ratings >= 4.5 and the lowest price <= 100€/day. (Screen shot)

   The image below show results that meet the requirement:

```
Hotels with high ratings (>= 4.5) and lowest price (<= 100€/day):
Hotel{name='Hue Riverside Resort', available_room='Garden Cottage', available_date='2023-12-06', rating=4.6, pricePerDay=70.0}
Hotel{name='Hanoi Grand Hotel', available_room='Standard Room', available_date='2023-12-02', rating=4.5, pricePerDay=80.0}
Hotel{name='Halong Bay Luxury Retreat', available_room='Classic Room', available_date='2023-12-04', rating=4.7, pricePerDay=90.0}
Hotel{name='Hanoi Grand Hotel', available_room='Superior Room', available_date='2023-12-01', rating=4.5, pricePerDay=100.0}
```

- **Second CSV requirement:**

4. Filter and display **the customer names** those have "paid" for the booking in Ascending order(names). (Screen shot)

   The image below show results that meet the requirement:

```
Customer names for paid bookings in ascending order:
Le Minh Quan
Nguyen Huu Thanh
Nguyen Thanh Tung
Nguyen Van Hieu
Nguyen Van Hoang
Nguyen Van Khanh
Tran Van Long
```

- **First Database requirement:**

DATABASE:

1. Use the CSV file and insert using the 'insert query' in java code and add all the values into the Database for *BookingDatabase, HotelDatabase.* (Screen shot of the inserted table in mysql)

This is the Booking Table:

name	hotel_name	room	booking_date	duration	paid
abc Filter...	abc Filter...	abc Filter...	abc Filter...	abc Filter...	abc F
Kim Anh	Saigon Skyline Suites	Deluxe Apartment	2023-12-01	3	0
Le Minh Quan	Saigon Skyline Suites	Standard Studio	2023-12-02	4	1
Le Thi Phuong Anh	Hanoi Grand Hotel	Superior Room	2023-12-03	2	0
Nguyen Duc Tin	Hue Riverside Resort	River View Bungalow	2023-12-05	15	1
Nguyen Huu Thanh	Ho Chi Minh City Oasis	Economy Room	2023-12-03	2	1
Nguyen Thanh Tung	Halong Bay Luxury Retr...	Luxury Cabin	2023-12-05	2	1
Nguyen Thi Lan	Da Nang Beach Resort	Poolside Suite	2023-12-01	2	0
Nguyen Van Hieu	Saigon Skyline Suites	Executive Suite	2023-12-01	5	1
Nguyen Van Hoang	Saigon Skyline Suites	Family Room	2023-12-02	4	1
Nguyen Van Khanh	Halong Bay Luxury Retr...	Classic Room	2023-12-04	3	1
Pham Thanh Huyen	Halong Bay Luxury Retr...	Premium Suite	2023-12-03	5	0
Tran Nhat Linh	Hue Riverside Resort	River View Bungalow	2023-12-04	3	0
Tran Thi My Linh	Hue Riverside Resort	Garden Cottage	2023-12-05	4	0
Tran Thi Thuy Linh	Da Nang Beach Resort	Sea View Villa	2023-12-01	2	0
Tran Van Long	Ho Chi Minh City Oasis	Standard Room	2004-10-10	3	1

This is the Hotel Table:

id	name	available_room	available_date	rating	pricePerDay
1	Hanoi Grand Hotel	Deluxe Room	2023-12-01	4.5	120
2	Hanoi Grand Hotel	Superior Room	2023-12-01	4.5	100
3	Hanoi Grand Hotel	Standard Room	2023-12-02	4.5	80
4	Da Nang Beach Resort	Sea View Villa	2023-12-01	4.3	200
5	Da Nang Beach Resort	Poolside Suite	2023-12-01	4.3	180
6	Da Nang Beach Resort	Family Room	2023-12-02	4.3	90
7	Saigon Skyline Suites	Executive Suite	2023-12-02	4.8	250
8	Saigon Skyline Suites	Deluxe Apartment	2023-12-02	4.8	300
9	Saigon Skyline Suites	Standard Studio	2023-12-03	4.8	120
10	Ho Chi Minh City Oasis	Standard Room	2023-12-02	4.2	100
11	Ho Chi Minh City Oasis	Economy Room	2023-12-03	4.2	80
12	Halong Bay Luxury R...	Luxury Cabin	2023-12-03	4.7	300
13	Halong Bay Luxury R...	Premium Suite	2023-12-03	4.7	900
14	Halong Bay Luxury R...	Classic Room	2023-12-04	4.7	90
15	Hue Riverside Resort	River View Bungalow	2023-12-05	4.6	150
16	Hue Riverside Resort	Garden Cottage	2023-12-06	4.6	70

- **Second Database Requirement:**

2. Write the query in the **java code** for 'Update the booking destination date/time' using UPDATE query and display using the select query in the *BookingDatabase* class. (Screen shot of the updated table in mysql)

For this, I add a function to input the date/time based on customer name in the terminal:

```
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Rows affected by INSERT: 1
Booking inserted successfully.
Bookings read from CSV and inserted into the database successfully.
Enter customer name to update booking date: █
```

I also add the error handling in case the name are not found in the terminal:

```
Bookings read from CSV and inserted into the database successfully.
Enter customer name to update booking date: tin
Enter new booking date (YYYY-MM-DD): 2004-06-15
Customer with name tin not found in the database.
Nguyens-MBP:Java_Final_Project Tin1$ █
```

The screenshots below show the booking date being updated:

First it is noticed to updated successfully in the terminal:

```
Booking inserted successfully.
Bookings read from CSV and inserted into the database successfully.
Enter customer name to update booking date: Nguyen Duc Tin
Enter new booking date (YYYY-MM-DD): 2004-06-15
Rows affected by UPDATE: 1
Booking date updated successfully.
Nguyens-MBP:Java_Final_Project Tin1$ █
```

The data being updated in the Booking Table in Mysql:

| Nguyen Duc Tin | Hue Riverside Resort | River View Bungalow | 2023-12-05 | 15 | 1 |

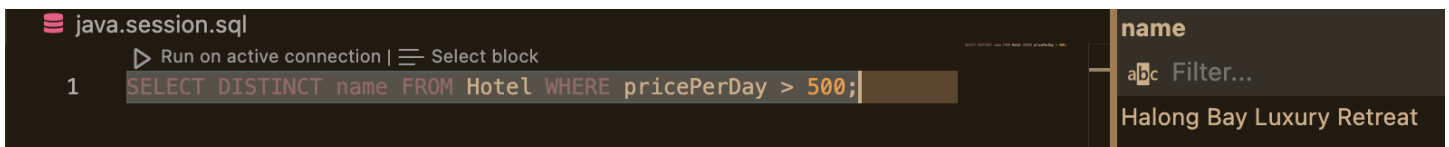| Nguyen Duc Tin | Hue Riverside Resort | River View Bungalow | 2004-06-15 | 15 | 1 |

- Second Database requirement:

3. Write the query in the **java code** to 'Display all destination(location) that has hotel cost more than 500€' using 'select' query in the *HotelDatabase* class. (Screen shot of the table in mysql)

I don't really understand your requirement so I added the query in the code then displayed the result in the terminal. The pictures below are the query and the result:

```java
public void displayHighCostDestinations() {
    try (Connection connection = getConnection();
        Statement statement = connection.createStatement()) {
        ResultSet resultSet = statement.executeQuery(sql:"SELECT DISTINCT name FROM Hotel WHERE pricePerDay > 500");
        System.out.println(x:"Destinations with hotel cost more than 500€:");
        while (resultSet.next()) {
            System.out.println(resultSet.getString(columnLabel:"name"));
        }
    } catch (SQLException e) {
        e.printStackTrace();
    }
}
```

```
Hotels read from CSV and inserted into the database successfully.
Destinations with hotel cost more than 500€:
Halong Bay Luxury Retreat
Nguyens-MBP:Java_Final_Project Tin1$
```

Also,i can use the query direct in session and got the same result:

```
java.session.sql
    ▷ Run on active connection | ☰ Select block
1   SELECT DISTINCT name FROM Hotel WHERE pricePerDay > 500;
```

name
abc Filter...
Halong Bay Luxury Retreat

That's all. Thank you for giving us such a great project, I learned a lot from it!