

PROJECT REPORT

SOFTWARE DESIGN TASK

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The software is designed in Java with extensive use of MySQL and Object-Oriented Programming. The Java application interacts with JDBC API, which uses the JDBC Driver to connect to MySQL Database.

The software has been tested using the Junit 5 unit testing framework, which was integrated with Mockito. The classes and methods have been successfully tested, including the testing of void methods. The project is also backed by High-Level and Low-Level design.

The description of all the tables as well as the task output has been discussed below:

Database Name: Travel

No. of tables: 7

```
mysql> show tables;
+-----+
| Tables_in_travel |
+-----+
| activity          |
| destination       |
| package_destinations |
| package_passengers |
| passenger         |
| passenger_activities |
| travel_package    |
+-----+
```

Description of each table:

➤ Travel Package table

```
mysql> desc travel_package;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Package_Name   | varchar(25) | NO   | PRI | NULL    |       |
| Package_Capacity | int       | YES  |     | NULL    |       |
| occupied       | int       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
```

➤ Destinations table

```
mysql> desc destination;
+-----+-----+-----+-----+-----+-----+
| Field          | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Destination_Name | varchar(25) | NO   | PRI | NULL    |       |
+-----+-----+-----+-----+-----+-----+
```

➤ **Package-Destinations table**

```
mysql> desc package_destinations;
```

Field	Type	Null	Key	Default	Extra
Package_Name	varchar(25)	NO	MUL	NULL	
Dest_name	varchar(25)	YES		NULL	

➤ **Activity table**

```
mysql> desc activity;
```

Field	Type	Null	Key	Default	Extra
Activity_Name	varchar(15)	NO	PRI	NULL	
Description	varchar(100)	YES		NULL	
Cost	int	YES		NULL	
Act_Capacity	int	YES		NULL	
Dest_Name	varchar(25)	YES	MUL	NULL	

5 rows in set (0.02 sec)

➤ **Passenger table**

```
mysql> desc passenger;
```

Field	Type	Null	Key	Default	Extra
Passenger_Number	int	NO	PRI	NULL	auto_increment
Passenger_Name	varchar(25)	YES		NULL	
Status	varchar(25)	YES		NULL	
Balance	int	YES		NULL	

➤ **Package-Passengers table**

```
mysql> desc package_passengers;
```

Field	Type	Null	Key	Default	Extra
Package_Name	varchar(25)	NO	MUL	NULL	
passenger_number	int	YES		NULL	

➤ **Passenger-Activities table**

```
mysql> desc passenger_activities;
```

Field	Type	Null	Key	Default	Extra
passenger_number	int	NO		NULL	
activity_name	varchar(25)	NO		NULL	

Dummy Data in each table:

➤ Travel Package table

```
mysql> select * from travel_Package;
+-----+-----+-----+
| Package_Name | Package_Capacity | occupied |
+-----+-----+-----+
| GreenEscapes | 3 | 2 |
| RoyaleRoute | 3 | 2 |
+-----+-----+-----+
```

➤ Destination table

```
mysql> select * from destination;
+-----+
| Destination_Name |
+-----+
| Bangalore        |
| Darjeeling       |
| Delhi            |
| Mumbai           |
| Shimla           |
+-----+
```

➤ Package-Destinations table

```
mysql> select * from package_destinations;
+-----+-----+
| Package_Name | Dest_name |
+-----+-----+
| RoyaleRoute  | Delhi     |
| RoyaleRoute  | Mumbai    |
| GreenEscapes | Darjeeling|
| GreenEscapes | Delhi     |
| GreenEscapes | Bangalore |
+-----+-----+
```

➤ Activity table

```
mysql> select * from activity;
+-----+-----+-----+-----+-----+
| Activity_Name | Description | Cost | Act_Capacity | Dest_Name |
+-----+-----+-----+-----+-----+
| BungeeJumping | Description1 | 800 | 4 | Bangalore |
| Camping        | Description2 | 500 | 1 | Darjeeling |
| Paragliding    | Description3 | 300 | 1 | Delhi     |
+-----+-----+-----+-----+-----+
```

➤ **Passenger table**

```
mysql> select * from passenger;
```

Passenger_Number	Passenger_Name	Status	Balance
1	Ram	Gold	750
2	Geeta	Standard	700
3	Babita	Premium	1023
4	Shyam	Standard	100

➤ **Package-Passengers table**

```
mysql> select * from package_passengers;
```

Package_Name	passenger_number
RoyaleRoute	1
RoyaleRoute	2
GreenEscapes	3
GreenEscapes	4

➤ **Passenger-Activities table**

```
mysql> select * from passenger_activities;
```

passenger_number	activity_name
1	Camping
2	Paragliding
3	Paragliding
4	BungeeJumping

PROJECT ILLUSTRATION

Menu:

```
Menu
1.Add new passenger
2.Print Itinerary of travel packages
3.Show Passengers in each package
4.Show Passenger Details
5.Show current activities available

Enter your choice number:
```

1. Add New Passenger

```
Menu
1.Add new passenger
2.Print Itinerary of travel packages
3.Show Passengers in each package
4.Show Passenger Details
5.Show current activities available

Enter your choice number: 1

Enter Passenger details

Enter Passenger Name: Himanshu
Enter status (Standard/Gold/Premium): Gold
Enter balance: 1100

"Database Updated"

Travel Packages-->

GreenEscapes
Package Capacity: 3
Occupied: 2

Available Destinations are

Darjeeling
Activities at this destination -->

Activity Name: Camping
Cost: 500
Description2
Seats available: 1
Destination: Darjeeling

Delhi
Activities at this destination -->

Activity Name: Paragliding
Cost: 300
Description3
Seats available: 1
Destination: Delhi

Bangalore
Activities at this destination -->

Activity Name: BungeeJumping
Cost: 800
Description1
Seats available: 4
Destination: Bangalore

RoyaleRoute
Package Capacity: 3
Occupied: 2

Available Destinations are

Delhi
Activities at this destination -->

Activity Name: Paragliding
Cost: 300
Description3
Seats available: 1
Destination: Delhi

Mumbai
(No activities available at this destination)

Choose travel package name: GreenEscapes

"Database Updated"

"Database Updated"

Choose the number of activities: 1

Choose activity: Camping
|
Your remaining balance is 650

"Database Updated"

"Database Updated"

"Database Updated"
```

Changes in database after addition of new passenger:

➤ Passenger table

```
mysql> select * from passenger;
```

Passenger_Number	Passenger_Name	Status	Balance
1	Ram	Gold	750
2	Geeta	Standard	700
3	Babita	Premium	1023
4	Shyam	Standard	100
5	Himanshu	Gold	650

➤ Travel Package table

```
mysql> select * from travel_Package;
```

Package_Name	Package_Capacity	occupied
GreenEscapes	3	3
RoyaleRoute	3	2

➤ Activity table

```
mysql> select * from activity;
```

Activity_Name	Description	Cost	Act_Capacity	Dest_Name
BungeeJumping	Description1	800	4	Bangalore
Camping	Description2	500	0	Darjeeling
Paragliding	Description3	300	1	Delhi

➤ Package-Passengers table

```
mysql> select * from package_passengers;
+-----+-----+
| Package_Name | passenger_number |
+-----+-----+
| RoyaleRoute  | 1                |
| RoyaleRoute  | 2                |
| GreenEscapes | 3                |
| GreenEscapes | 4                |
| GreenEscapes | 5                |
+-----+-----+
```

➤ Passenger-Activities table

```
mysql> select * from passenger_activities;
+-----+-----+
| passenger_number | activity_name |
+-----+-----+
| 1                | Camping       |
| 2                | Paragliding   |
| 3                | Paragliding   |
| 4                | BungeeJumping|
| 5                | Camping       |
+-----+-----+
```

2. Print Itinerary of travel packages

```
Menu
1.Add new passenger
2.Print Itinerary of travel packages
3.Show Passengers in each package
4.Show Passenger Details
5.Show current activities available

Enter your choice number: 2

Travel Packages-->

    GreenEscapes

Package seats full

    RoyaleRoute
Package Capacity: 3
Occupied: 2

Available Destinations are

Delhi
Activities at this destination -->

    Activity Name: Paragliding
    Cost: 300
    Description3
    Seats available: 1
    Destination: Delhi

Mumbai
(No activities available at this destination)
```


3. Show passengers in each package

```
Menu
1.Add new passenger
2.Print Itinerary of travel packages
3.Show Passengers in each package
4.Show Passenger Details
5.Show current activities available
```

Enter your choice number: 3

```
GreenEscapes
Package Capacity: 3
Occupied: 3
```

```
Passenger Number: 3
Passenger Name: Babita
```

```
Passenger Number: 4
Passenger Name: Shyam
```

```
Passenger Number: 5
Passenger Name: Himanshu
```

```
RoyaleRoute
Package Capacity: 3
Occupied: 2
```

```
Passenger Number: 1
Passenger Name: Ram
```

```
Passenger Number: 2
Passenger Name: Geeta
```

4. Show passenger details

```
Menu
1.Add new passenger
2.Print Itinerary of travel packages
3.Show Passengers in each package
4.Show Passenger Details
5.Show current activities available
```

Enter your choice number: 4

Passenger Details

```
Passenger Number: 1
Passenger Name: Ram
Passenger status: Gold
Passenger balance: 750
1.Activity Name: Camping
Destination: Darjeeling
Amount Paid: 450
```

```
Passenger Number: 2
Passenger Name: Geeta
Passenger status: Standard
Passenger balance: 700
1.Activity Name: Paragliding
Destination: Delhi
Amount Paid: 300
```

```
Passenger Number: 3
Passenger Name: Babita
Passenger status: Premium
1.Activity Name: Paragliding
Destination: Delhi
Amount Paid: 0
```

```
Passenger Number: 4
Passenger Name: Shyam
Passenger status: Standard
Passenger balance: 100
1.Activity Name: BungeeJumping
Destination: Bangalore
Amount Paid: 800
```

```
Passenger Number: 5
Passenger Name: Himanshu
Passenger status: Gold
Passenger balance: 650
1.Activity Name: Camping
Destination: Darjeeling
Amount Paid: 450
```

5. Show current activities available

```
Menu
1.Add new passenger
2.Print Itinerary of travel packages
3.Show Passengers in each package
4.Show Passenger Details
5.Show current activities available

Enter your choice number: 5
List of Activities that still have spaces available
```

```
Activity Name: BungeeJumping
Cost: 800
Description1
Seats available: 4
Destination: Bangalore
```

```
Activity Name: Paragliding
Cost: 300
Description3
Seats available: 1
Destination: Delhi
```