

SPACE TOURISM

BOOKING AND MANAGEMENT SYSTEM

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Introduction

The Space Tourism Booking and Management System is an online platform that allows users (space tourists) to book trips to different planetary destinations such as Mars, Jupiter, or Earth orbit.

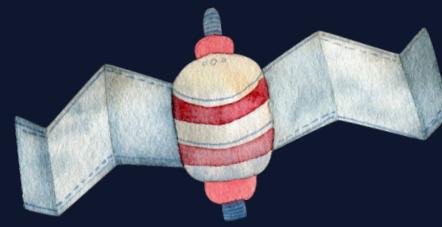
The system manages traveler information, route capacities, astronaut operations, payments for each spaceflight and rocket spaceflight and rocket.

Technology Stack:

- Language: Java
- Libraries: JavaFX, JDBC
- Database: MySQL

MySQL Tables Summary

1. Astronauts – Stores crew and supervisors, with self-referencing supervisor_id.
2. Guests – Tourists booking space trips.
3. Destinations – Planets and moons with distance data.
4. Rockets – Rocket models with range and capacity.
5. Launch_Sites – Locations where missions launch.
6. Missions – Space journeys with rocket, destination, site, dates.
7. Mission_Astronauts – Links astronauts to missions with roles.
8. Bookings – Stores guest reservations and seat assignments.
9. Payments – Tracks payment info, method, and status.
10. Reviews – Stores ratings and comments after reservation.



Moon



Jupiter

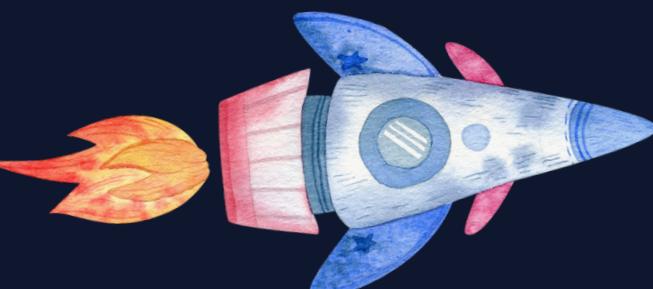


Europa
Ganymede

Destinations



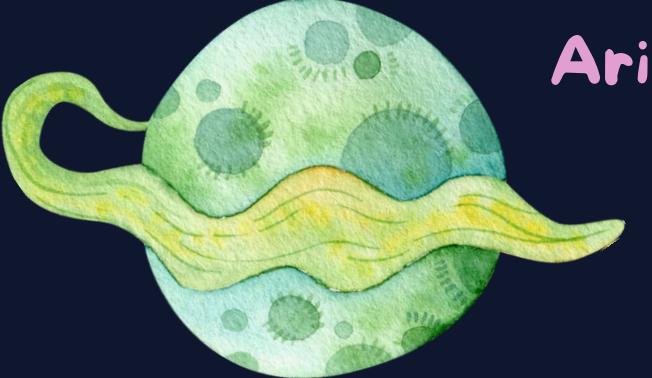
Cape Canaveral Space Launch Complex 40
Vandenberg Space Force Base Space Launch Complex 4E



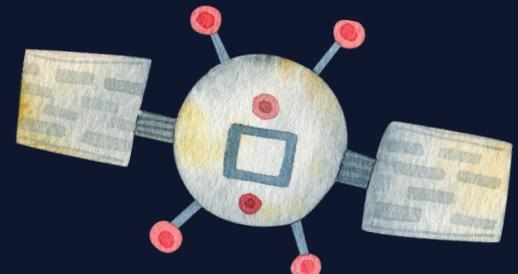
Uranus



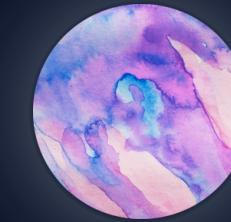
Miranda
Ariel



Mimas
Enceladus
Tethys



Neptune



Triton

Pluto



Charon

Rockets

Red Dwarf
Type: Medium
Max Range: 0.50 million km
Capacity: 2 passengers

New Glenn
Type: Heavy
Max Range: 700.00 million km
Capacity: 2 passengers

Nova
Type: Light
Max Range: 1300.00 million km
Capacity: 3 passengers

Eclipse
Type: Medium
Max Range: 3000.00 million km
Capacity: 4 passengers

SpaceX Starship
Type: Heavy
Max Range: 6000.00 million km
Capacity: 5 passengers



Astronauts



Supervisors



Neil Armstrong



Edwin "Buzz" Aldrin



Charles "Pete" Conrad



Alan Shepard



John Young

Crew Members



Alan Bean



Edgar Mitchell



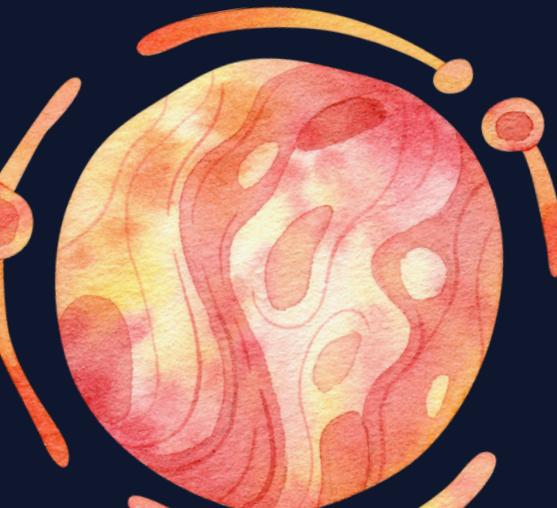
David Scott



James Irwin



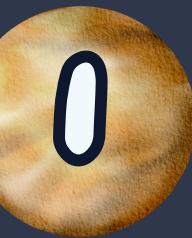
Charles Duke



★ Key Technical Rules★

Mission Astronauts Rules

- Each mission must have:
 - 1 Supervisor
 - 1 Crew Member
- Roles stored in Astronauts table.



Capacity Management

- Seats depend on rocket capacity.
- Real-time seat tracking via AvailableSeats view.
- Prevents overbooking.



Rocket and Range Logic

- Each rocket has:
 - Max range (M km)
 - Capacity and type (Heavy, Medium, Light)
- Rocket must support the destination's distance.

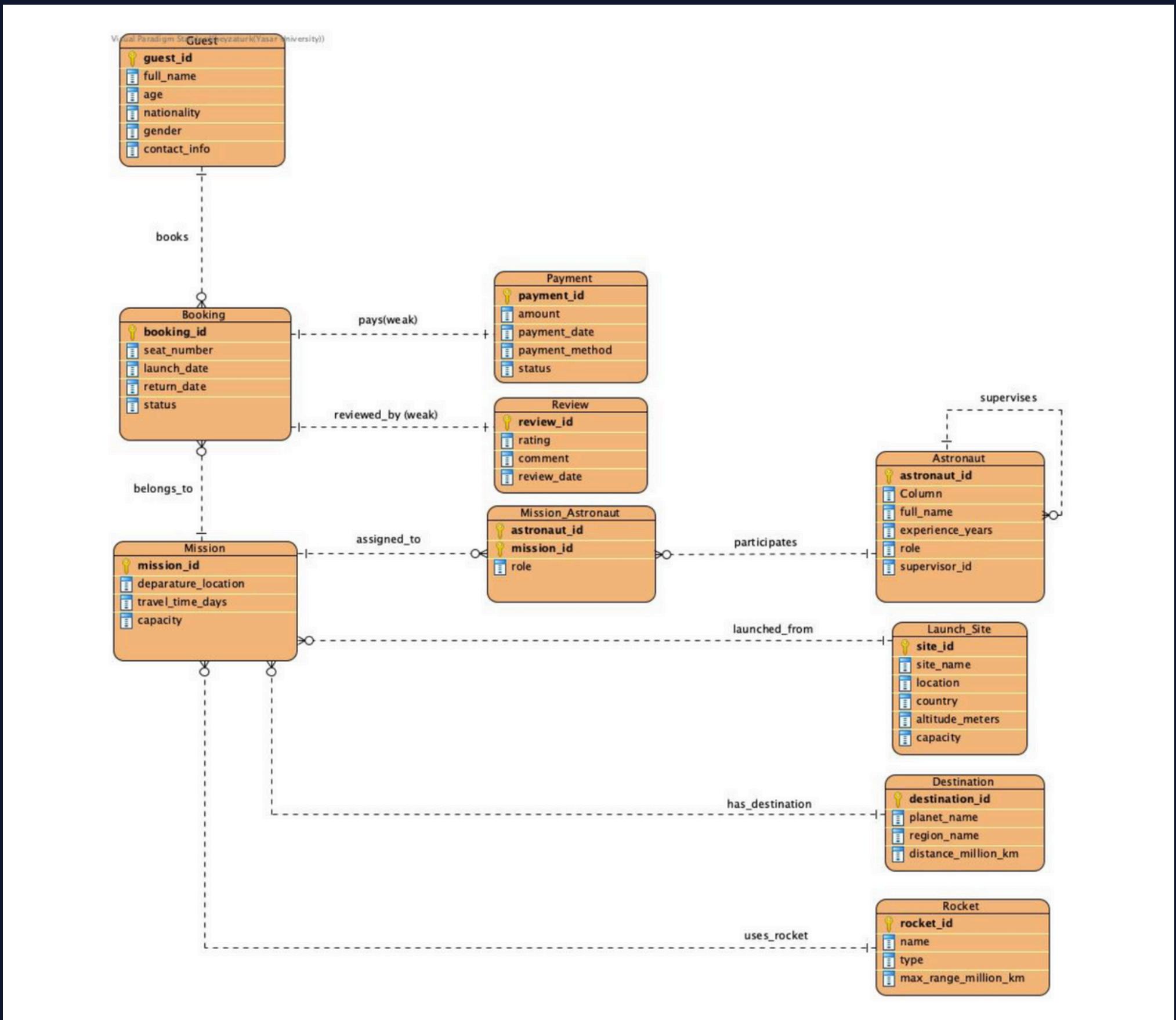


Review System

- Guests can:
 - Rate (1-5 stars)
 - Leave feedback after reservations.



ER Diagram



Database Connector



```
3
4 import java.sql.Connection;
5 import java.sql.DriverManager;
6 import java.sql.SQLException;
7
8 public class DatabaseConnector {
9     private static final String URL = "jdbc:mysql://localhost:3306/SpaceTourismDB";
10    private static final String USER = "root";
11    private static final String PASSWORD = "1234";
12
13    public DatabaseConnector() {
14    }
15
16    public static Connection getConnection() throws SQLException {
17        return DriverManager.getConnection("jdbc:mysql://localhost:3306/SpaceTourismDB", "root", "1234");
18    }
19 }
20
```



Admin - Mission Creation Interface

Space Toursim App

Admin Panel Customer Panel

Create New Mission

Rocket:

Eclipse (Medium, 3000.0M km)

Destination:

Saturn – Enceladus (1275.5M km)

Launch Site:

Cape Canaveral Space Launch Complex 40

Supervisor Astronaut:

Neil Armstrong (Supervisor)

Crew Astronaut:

Alan Bean (Crew)

Mission Name:

Explore New Planets

Travel Days:

10

Amount:

4500

Launch Date:

16.06.2025

Return Date:

26.06.2025

Create Mission

Çöp

How Data is Written from Java to SQL



Customer - Select Available Mission Interface

Space Tourism Booking System

Step 2: Select Mission

Select Available Mission

Available Seats: 4 | Mission: Explore New Planets

Explore New Planets – Saturn (10 days)

MISSION DETAILS

- Mission Name: Explore New Planets
- Rocket: Eclipse
- Destination: Saturn
- Launch Site: Cape Canaveral Space Launch Complex 40
- Travel Time: 10 days
- Supervisor: Neil Armstrong
- Crew: Alan Bean
- Launch Date: 2025-06-16
- Return Date: 2025-06-26

AVAILABLE SEATS: 4

Amount: \$4500,00

Select Your Destination

Saturn – Enceladus (1275.5M km)

Previous Next

Çö

Customer - Guest Information Interface

Space Toursim App

Admin Panel Customer Panel

Space Tourism Booking System

Step 3: Guest Information

Guest Information

Full Name: Beyza Türk

Age: 21

Nationality: TURKISH

Gender: Female

Contact Info: 0555 555 55 55

Select Your Destination

Saturn - Enceladus (1275.5M km)

Previous Next

How Data is Written from Java to SQL

| guest_id | full_name | age | nationality | gender | contact_info | |
|----------|------------|------|-------------|--------|----------------|--|
| 3 | Beyza Türk | 21 | TURKISH | Female | 0555 555 55 55 | |
| | NULL | NULL | NULL | NULL | NULL | |
| | | | | | | |
| | | | | | | |

Customer - Payment Information Interface

The screenshot displays the 'Space Tourism Booking System' interface, specifically the 'Customer Panel' under the 'Space Toursim App'. The title bar includes the app name and a yellow star icon. The main content area shows the 'Step 4: Payment' section, which contains fields for 'Payment Method' (set to 'Crypto') and 'Amount' (set to '4500.0'). Below this is the 'Select Your Destination' section, with a dropdown menu showing 'Saturn – Enceladus (1275.5M km)'. Navigation buttons 'Previous' and 'Next' are at the bottom.

Space Tourism Booking System

Step 4: Payment

Payment Information

Payment Method:

Crypto

Amount:

4500.0

Select Your Destination

Saturn – Enceladus (1275.5M km)

Previous

Next

How Data is Written from Java to SQL



| payment_id | booking_id | amount | payment_date | payment_meth... | status | |
|------------|------------|---------|--------------|-----------------|--------|------|
| 4 | 3 | 4500.00 | 2025-06-15 | Crypto | Paid | |
| | NULL | NULL | NULL | NULL | NULL | NULL |
| | | | | | | |



Customer - Ticket Information Interface

Space Tourism Booking System

Step 5: Your Ticket

Your Ticket

Booking ID: 3
Mission Name: Explore New Planets
Seat Number: 1
Launch Date: 2025-06-16
Return Date: 2025-06-26
Status: Confirmed
Destination: Saturn
Rocket: Eclipse
Amount: 4500.0

Select Your Destination

Saturn – Enceladus (1275.5M km)

Previous Next

The screenshot displays the 'Space Toursim App' interface. At the top, there are tabs for 'Admin Panel' and 'Customer Panel', with 'Customer Panel' being active. The main title 'Space Tourism Booking System' is centered above the current step, 'Step 5: Your Ticket'. A section titled 'Your Ticket' contains detailed booking information. Below this, another section titled 'Select Your Destination' shows a dropdown menu set to 'Saturn – Enceladus (1275.5M km)'. Navigation buttons 'Previous' and 'Next' are located at the bottom of the page.

How Data is Written from Java to SQL



| booking_id | guest_id | mission_id | seat_number | launch_date | return_date | status | |
|------------|----------|------------|-------------|-------------|-------------|-----------|--|
| 3 | 3 | 3 | 1 | 2025-06-16 | 2025-06-26 | Confirmed | |
| | NULL | NULL | NULL | NULL | NULL | NULL | |



Customer - Review Experience Interface

Space Tourism Booking System

Step 6: Review

Review Your Experience

Rating:

5

Comment:

It was a great reservation experience, the interface was really customer friendly! 🌟

Submit Review

Select Your Destination

Saturn – Enceladus (1275.5M km)

Previous

Finish

How Data is Written from Java to SQL

| review_id | booking_id | rating | comment | review_date |
|-----------|------------|--------|--|-------------|
| 2 | 3 | 5 | It was a great reservation experience, the interface was really customer friendly 100 | 2025-06-15 |
| NULL | NULL | NULL | NULL | NULL |

<https://github.com/RestoredLama/Space-Tourism-Booking-and-Management-System>



Space-Tourism-Booking-and-Management-System Public Watch 0

main 3 Branches 0 Tags Go to file Add file Code

| | | |
|--|-------------------------|------------|
| turkbezya Create readme file | d733f89 · 2 minutes ago | 20 Commits |
| SpaceAtlantic bug fixing | 2 days ago | |
| .DS_Store .. | 4 days ago | |
| README.md Create readme file | 2 minutes ago | |
| SpaceAtlanticc.sql ... | 3 days ago | |
| mysql-connector-j-9.3.0_6215d24b6cfdc41... | 4 days ago | |

README

Space Tourism Booking and Management System

A comprehensive Java application for managing space tourism operations, including mission planning, booking management, and customer interactions.

Features

- Mission Management

Thank
you!

Let's Explore the Universe, Together