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| --- | --- |
| Student Name | Sameer Sharma |
| Course Name | Caltech Coding Bootcamp |
| Cohort Information | CB FSD OCT 2024 COHORT 1 |
| Course # | 3 |
| Course Title | API End Points and Communication |
| Project | Course-end Project 1 – My Cab Buddy |

# Problem Statement

George owns a travel company where he books cabs for his customers. To manage these bookings, he needs travel management software. He meets Kia, who runs a Software Solution Company and tells her the requirement.

Kia aims to develop the project using Spring and the Spring Boot Framework. She must create micro-services to provide a solution using a REST architecture and perform unit testing for various web methods.

## Approach

### Architecture

Eureka Server

Micro-Service #1 – Booking (contains both Book and Customer class)

Micro-Service #2 – Fare Calculation (takes details from booking class and returns all necessary details)

Micro-Service #3 – View model

Database – MySQL

View Technology – Thymeleaf

### Database Structure

|  |  |  |
| --- | --- | --- |
| Tables | Booking | Customer |
| Primary Key | Booking ID (bookingid) | Customer ID (customerid) |
| Other fields | Pickup location (source)  Destination (destination)  Distance (distancetravelled)  Rate (ratepermile)  Final Amount (finalamt)  Email (email) | Name (customer\_name)  Email (email)  Phone Number (phone\_number)  Payment Method (payment\_method) |

### Fare Calculator

Pickup location (Source)

Destination

Distance

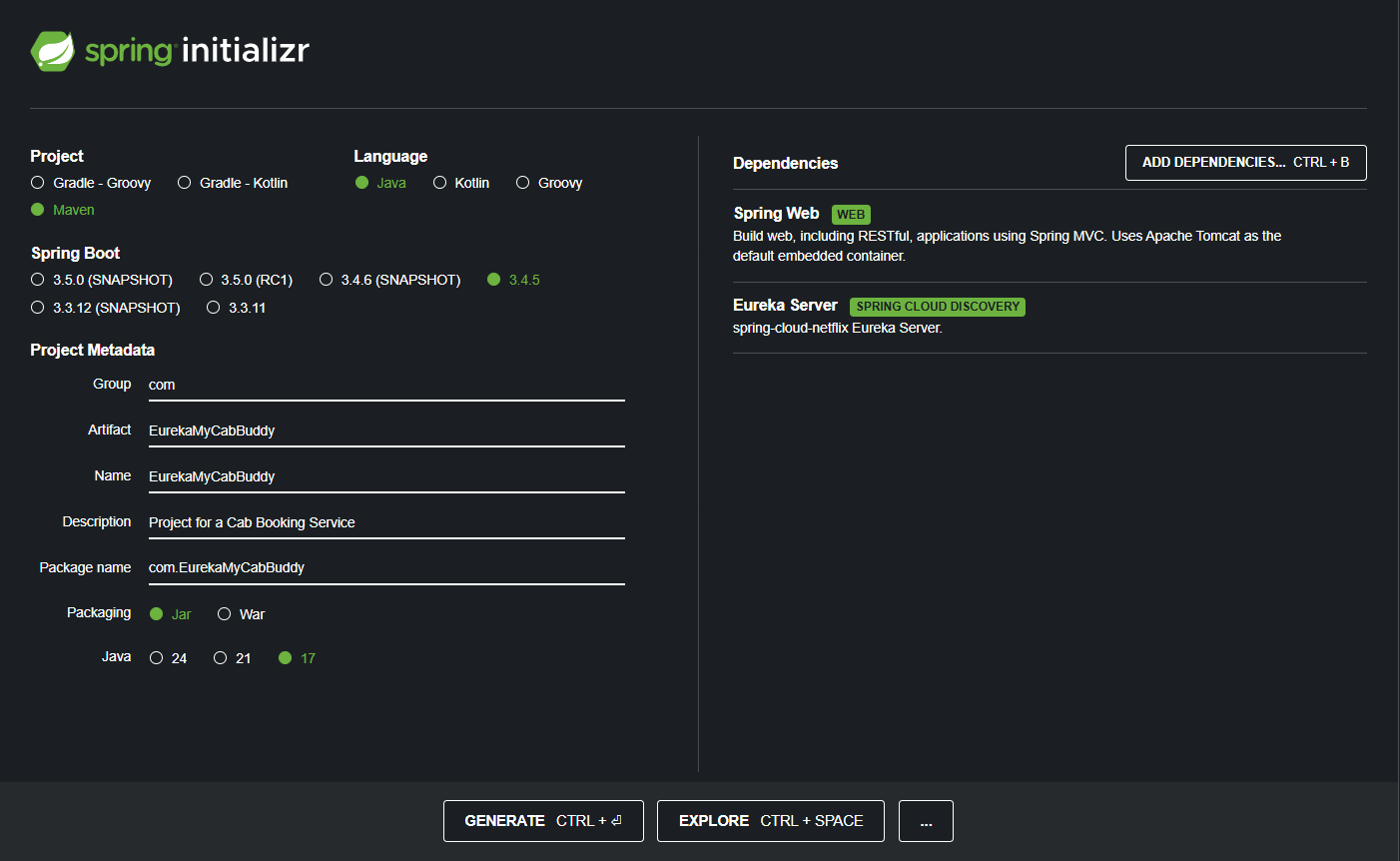
Rate

Final Amount

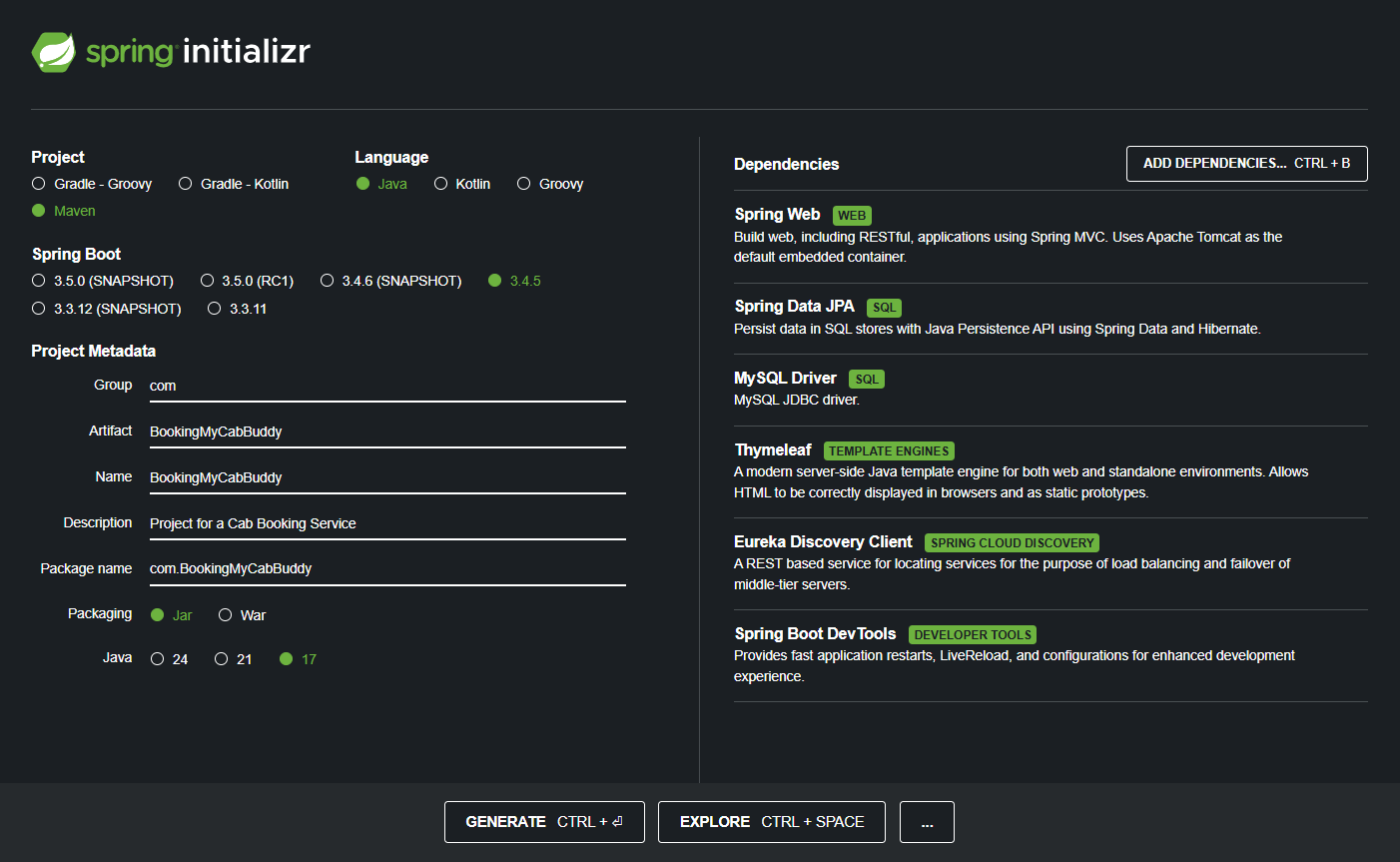
### Project Details

|  |  |
| --- | --- |
| Projects | Port Numbers |
| Eureka server | 8761 |
| Booking micro-service | 8762 |
| Fare Calculator micro-service | 8763 |
| View micro-service | 8764 |
| MySQL database name | my\_cab\_buddy |

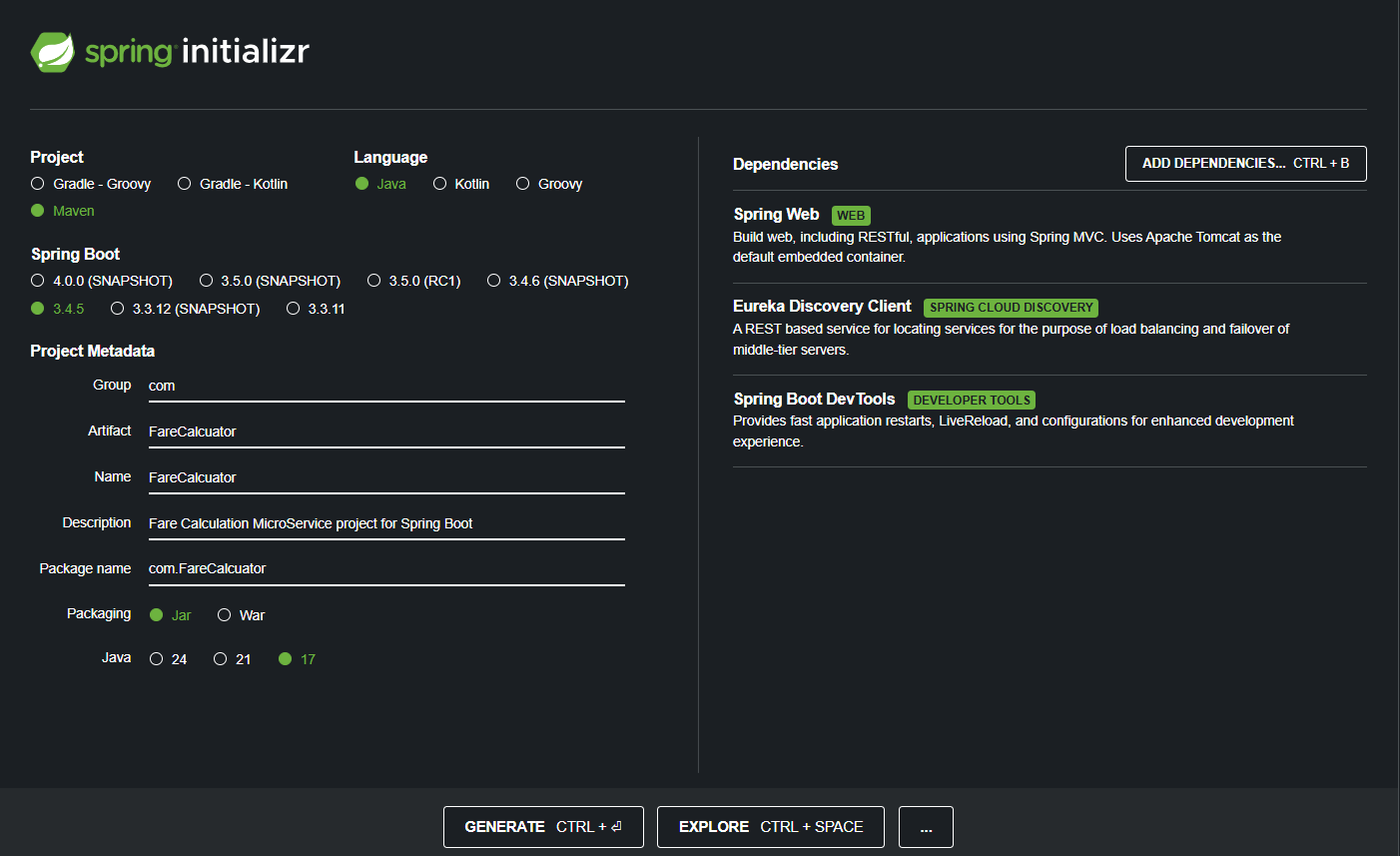
### Eureka Server (Spring Initializr)



### Booking Project (Spring Initializr)



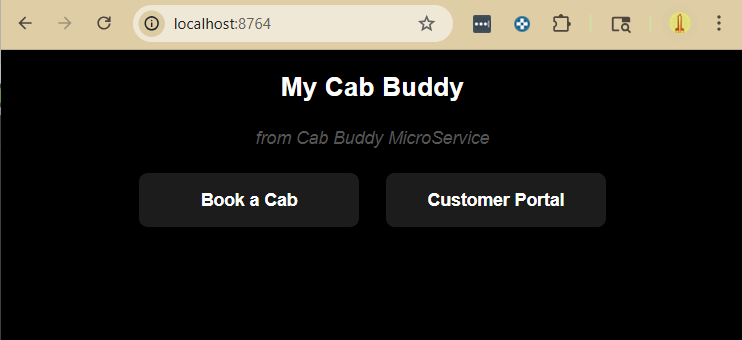
### Fare Calculation (Spring Initializr)

  
**Cab Bubby View (Spring Initializr)**

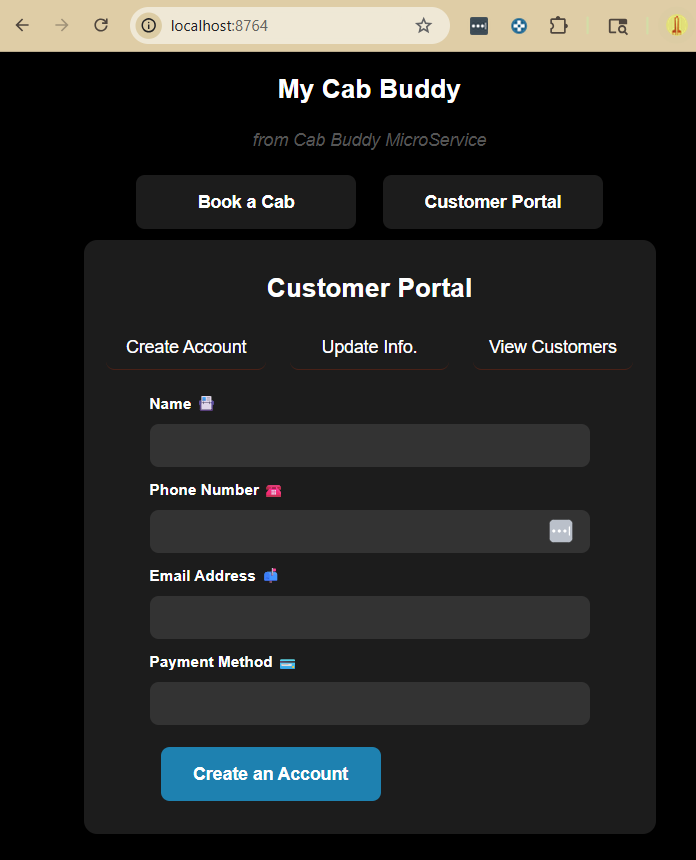
# Demo

## Scenario 1: Adding Customer

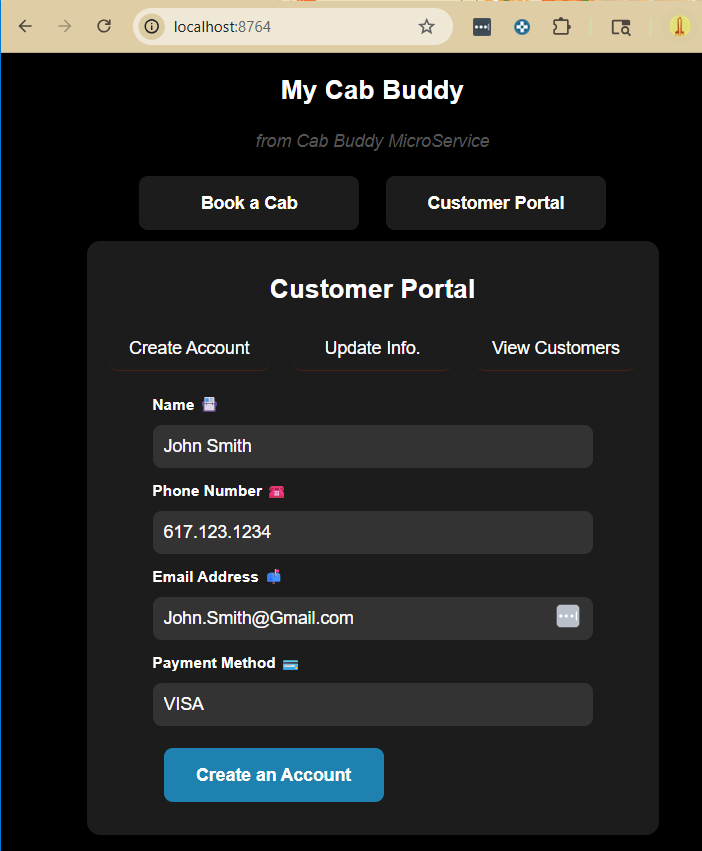
1. Main landing page (index.html)



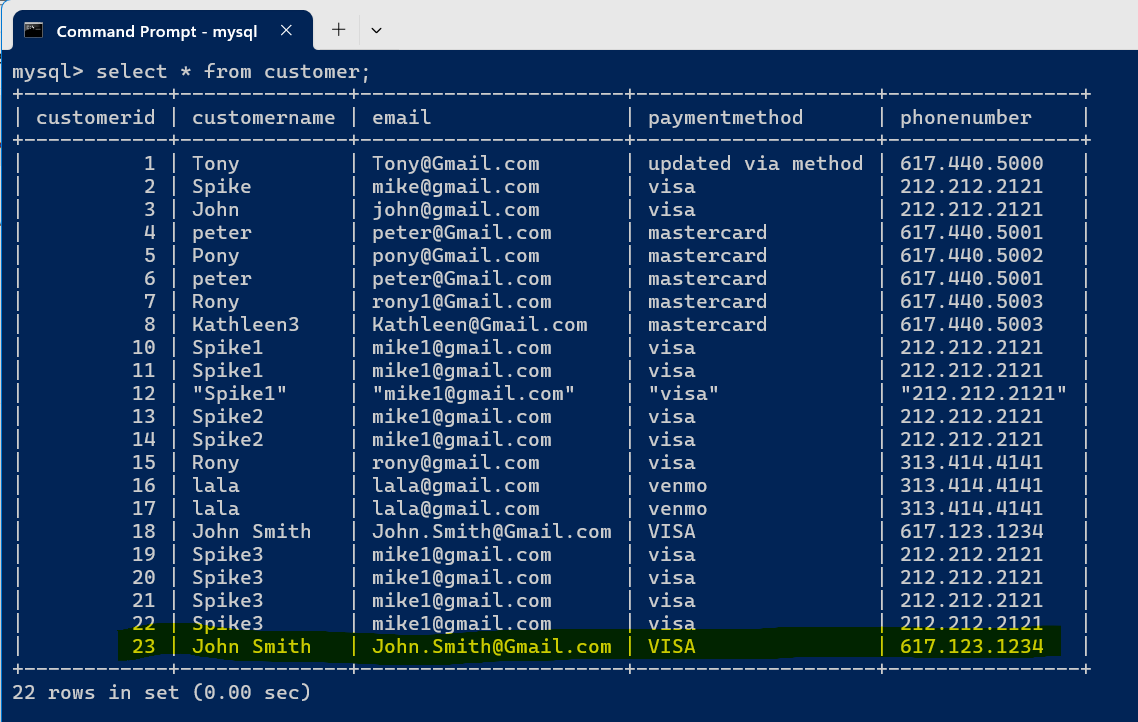
1. Click “Customer Portal” and click “Create Account”.



1. Enter Customer details and click “Create an Account”.

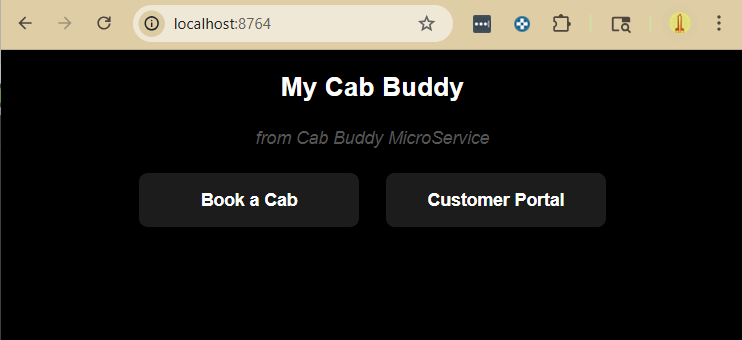


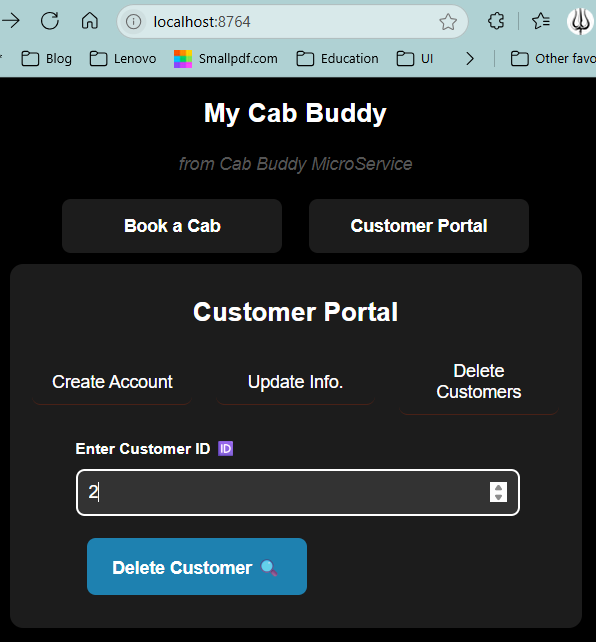
1. Customer details stored in Customer table in MySQL database.



## Scenario 2: Deleting Customer

1. **Step 1:** Access landing page (index.html)



1. **Step 2:** Click ‘Customer Portal’ and click ‘Delete Customer’.
2. 
3. **Step 3:** Enter ‘Customer ID’ and click ‘Delete Customer’.
4. **Step 4:** Customer details deleted from MySQL table.

*Before:*

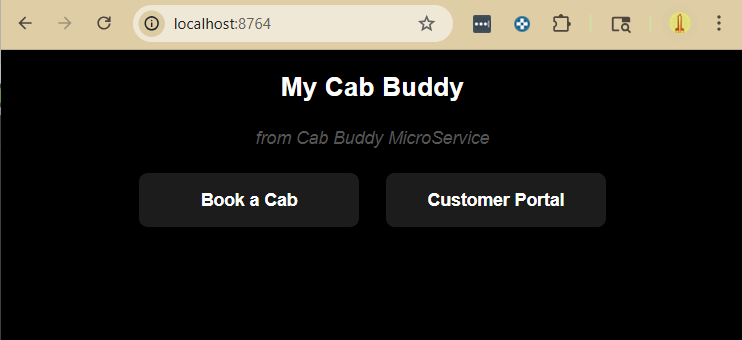


*After:*

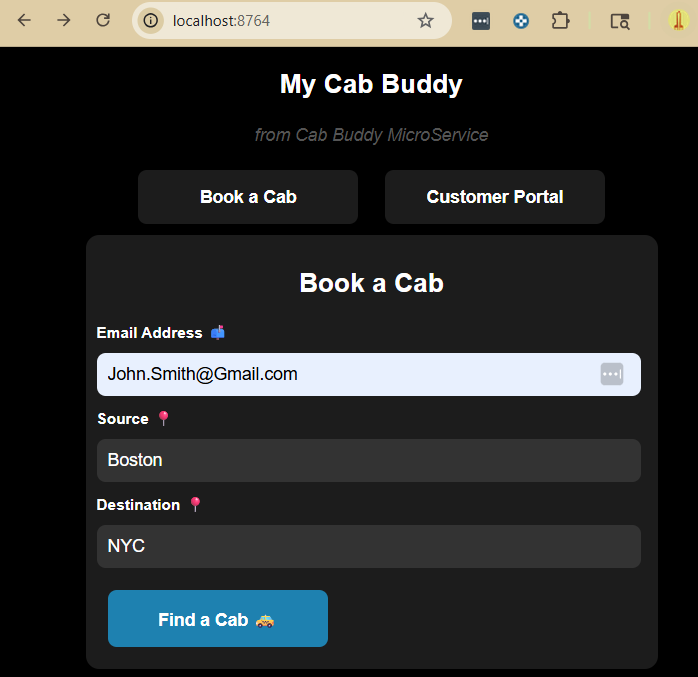


## Scenario 3: Make a booking

1. Access landing page (index.html)



1. Click ‘Book a Cab’, enter ‘Customer Email Address’, ‘Source’ and ‘Destination’ and click ‘Find a Cab’ button.



Booking is created in from MySQL table with calculated distance traveled, rate per mile and final amount.

