

Online Bus Ticket Booking Application

Spring Boot MVC Application Documentation

1. Project overview :

This documentation provides comprehensive guide to setting up, configuration, and running a spring boot MVC application. This guide includes setting up the development environment, configuring the application, and running the project.

2. Prerequisites:

- Java Development kit(JDK)
- Maven
- IDE(eclipse)
- Git
- Spring initializer

3. Setting up project:

1. Add spring initializer to add dependencies - either we can add spring initializer externally or install spring inside eclipse IDE
2. Create New project in eclipse and choose starter project
3. Create artifact id and group id
4. Choose dependencies which is needed for project
 - a. Spring web – for developing web or rest API
 - b. Spring boot dev tools – for live reload server
 - c. MySQL driver - database
 - d. Validation – for user input restriction
 - e. Lombok – to avoid boiler plate code

- f. Spring data JPA – to connect mysql
- g. Thymeleaf – template engine
- h. Spring security(JSON Web Token authorization and authentication)

4. Configuring the application:

1. After creating a project, to connect spring boot to database add some properties in application properties like database uri, username, password and hibernate for creating a database
2. In main folder create a packages for control, model, service, repository, security configuration, validation
3. Create a entity(user, role, register, bus ,booking, passenger,) and add some validation to those fields, create repository interface, create service interface and class, create controller class
4. Add custom exception handling and validation
5. Add spring security using JSON web token authentication and authorization for user and admin, where patient can book ticket and add their details, admin can edit, add and update data's for bus routes and timings.
6. Create frontend templates in static → template folder and connect frontend to backend by using thyme leaf template engine

5. Running the Application:

1. Run the main class as java application or we can also run it by right click on the project and run as spring boot app
2. By default add the admin email and password and store it in database using password encoder for password section
3. By default the tomcat server is loaded and type a link in website like “localhost:8090/endpoints” to check our application running.

6. Deploying the project using railway:

1. After completing the project, I was creating a demo video of my project.

Here is the link →

[“https://drive.google.com/file/d/1kvGueiAVnx2jmDumNP_kXoWiEvEGeq5h/view”](https://drive.google.com/file/d/1kvGueiAVnx2jmDumNP_kXoWiEvEGeq5h/view)

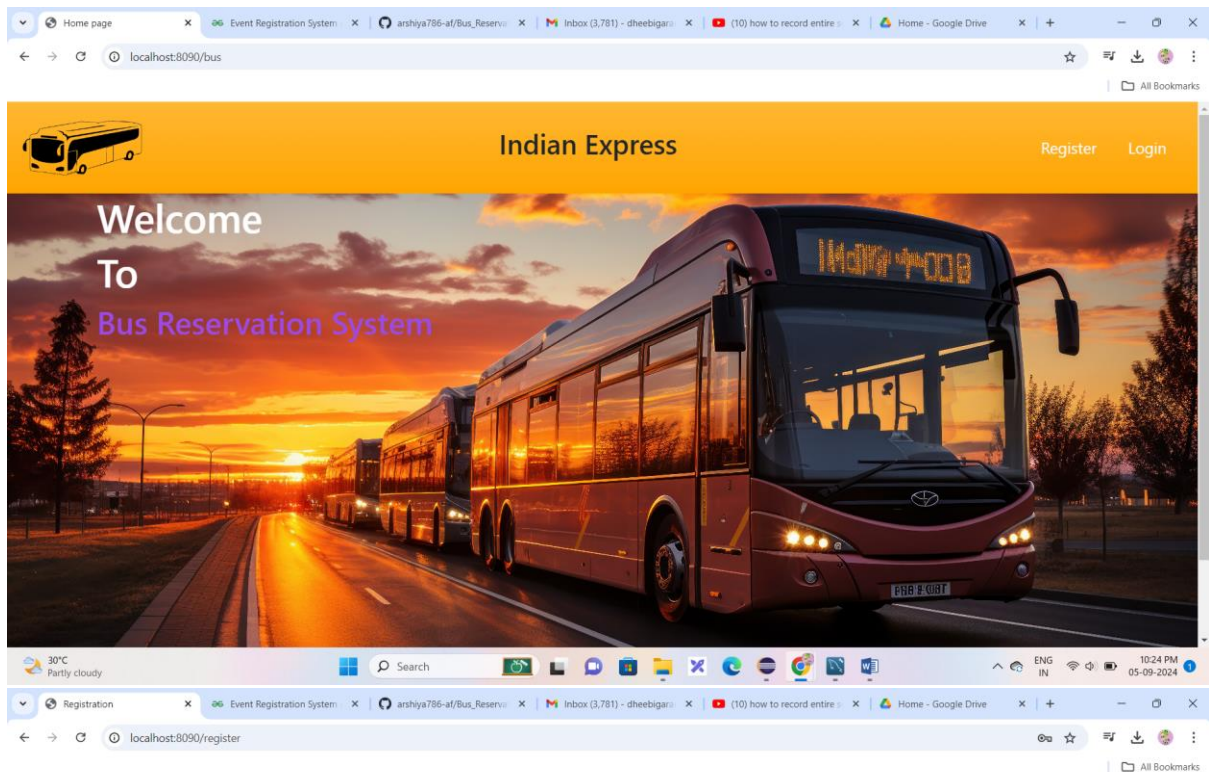
Endpoints:

- ✓ /bus
- ✓ /login
- ✓ /register
- ✓ /logout
- ✓ /admin
- ✓ /booking
- ✓ /admin/add
- ✓ /admin/update/{id}
- ✓ /booking
- ✓ /booking/search
- ✓ /booking/book
- ✓ /booking/history
- ✓ /booking/ticket/{id}

- ✓ /booking/passengers
- ✓ /booking/passenger/add
- ✓ /booking/passenger/update/{id}
- ✓ /booking/profile

Sample pictures:

1.Login and registration:



Registration

First Name:

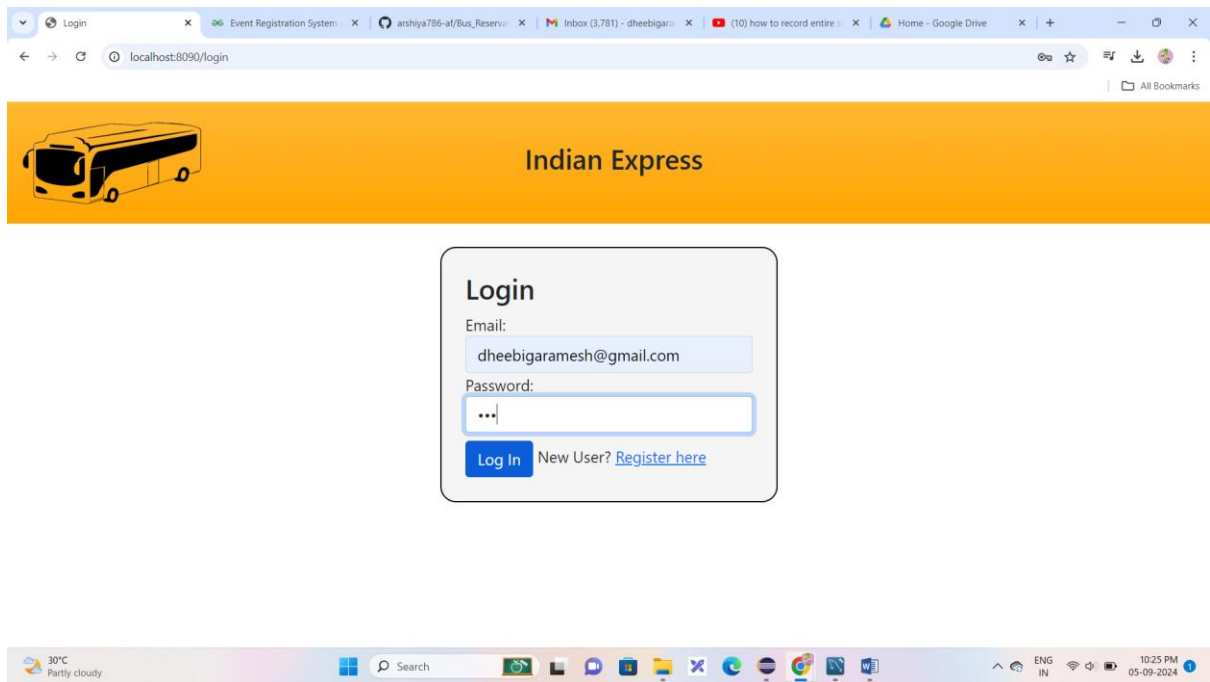
Last Name:

Email:

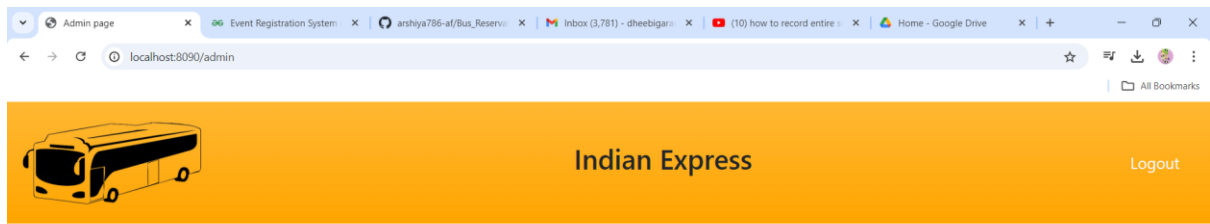
Password:

Already registered? [Login here](#)





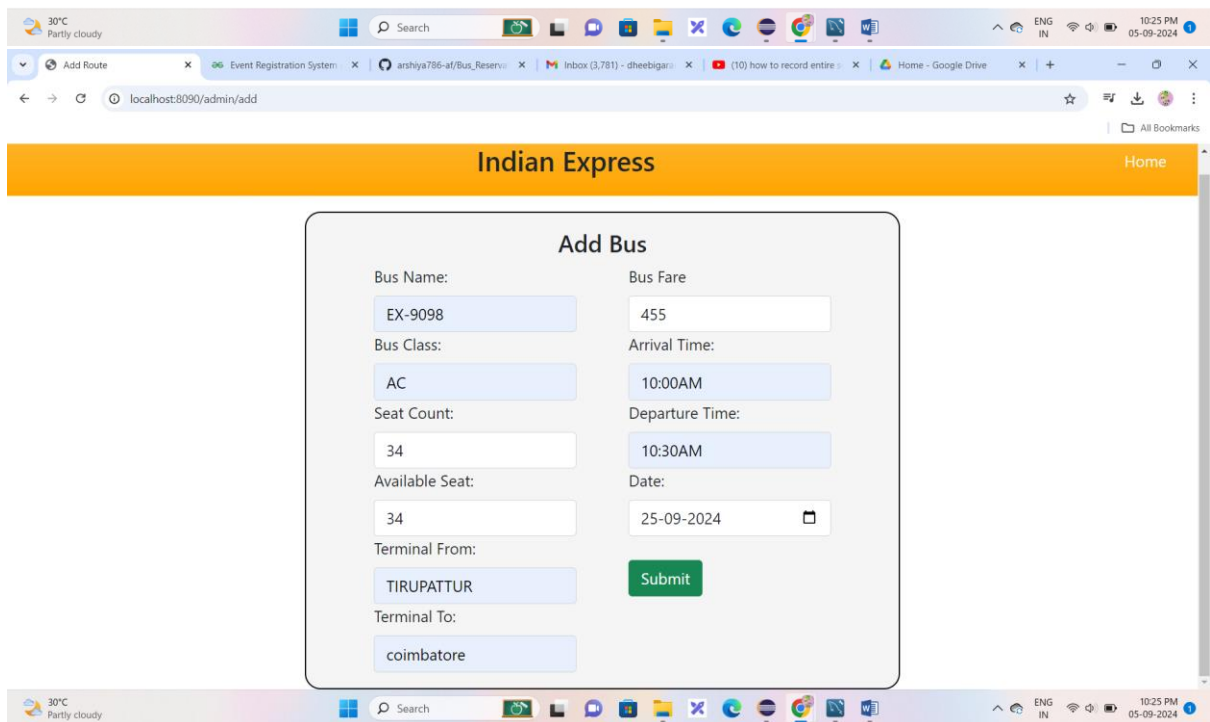
2.Admin page:

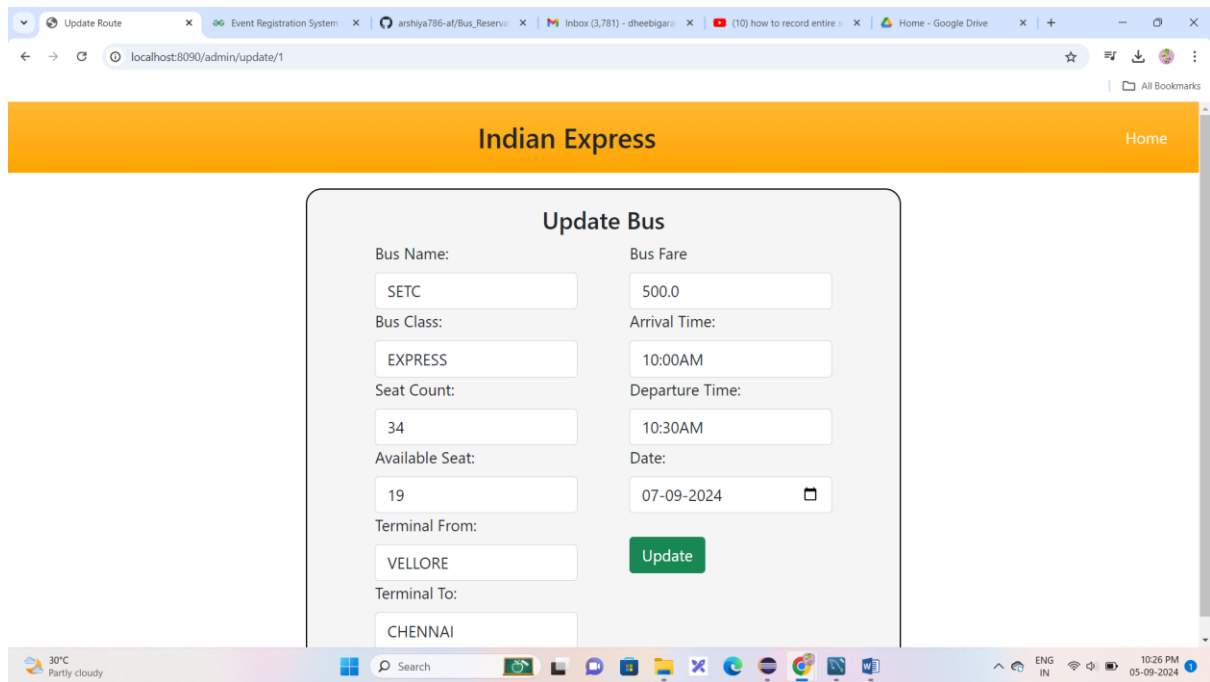


Bus Routes

Add Routes

Bus Id	Bus Number	Bus Class	Seat Count	Available Seat	Terminal From	Terminal To	Fare	Arrival Time	Departure Time	Travel Date	Actions
1	SETC	EXPRESS	34	19	VELLORE	CHENNAI	500.0	10:00AM	10:30AM	2024-09-07	<button>Delete</button> <button>Update</button>
3	EX-9098	AC SLEEPER	34	31	Tirupati	CHENNAI	400.0	6:00AM	6:30AM	2024-09-10	<button>Delete</button> <button>Update</button>





3.Passengers page:



Indian Express

History & Ticket

Passengers list

Profile

Logout

From:

VELLORE

To:

CHENNAI

Date:

07-09-2024

Submit

Bus Routes

BusId	BusName	BusClass	AvailableSeatCount	TerminalFrom	TerminalTo	Fare	ArrivalTime	DepartureTime	TravelDate
1	SETC	EXPRESS	19	VELLORE	CHENNAI	500.0	10:00AM	10:30AM	2024-09-07
3	EX-9098	AC SLEEPER	31	Tirupati	CHENNAI	400.0	6:00AM	6:30AM	2024-09-10



Indian Express

Home

Available Bus Routes

BusId	BusNumber	BusClass	AvailableSeatCount	TerminalFrom	TerminalTo	Fare	ArrivalTime	DepartureTime	TravelDate	Actions
1	SETC	EXPRESS	19	VELLORE	CHENNAI	500.0	10:00AM	10:30AM	2024-09-07	<div>Book</div>

Indian Express

Home

Book Bus

Number of seat:

Bus Id:

Passenger Id:

Book

bus-image

Indian Express

Logout

History

Bus Id	Bus Name	Terminal From	Terminal To	Passenger Name	Seat Count	Total Fare	Status	Ticket
1	SETC	VELLORE	CHENNAI	Dheebiga R	4	2000.0	Booked successfully	View
1	SETC	VELLORE	CHENNAI	Vignesh R	2	1000.0	Booked successfully	View
1	SETC	VELLORE	CHENNAI	Vignesh R	4	2000.0	Booked successfully	View
1	SETC	VELLORE	CHENNAI	Vennila R	5	2500.0	Booked successfully	View
3	EX-9098	Tirupati	CHENNAI	Vignesh R	3	1200.0	Booked successfully	View

Indian Express

History & Ticket Home

Ticket

Ticket Id: 2
Bus Name:SETC
Passenger Name: Vignesh R
Number of seats: 2
Fees: Rs.1000.0
Travel Date: 2024-09-07

Have a wonderful Journey 🚌!!

bus-image

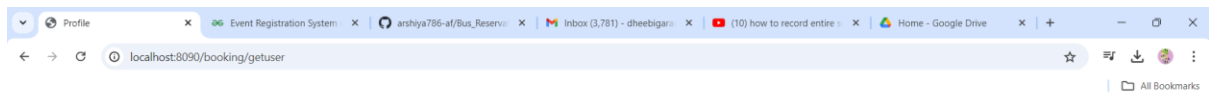
Indian Express

Home

Passengers list

Add Passenger

Passenger Id	Name	Age	Contact Details	Actions
1	Dheebiga R	23	7538818752	<button>Update</button>
2	Vignesh R	24	7538818753	<button>Update</button>
3	Vennila R	37	9570054673	<button>Update</button>
4	Ramesh	49	9442844976	<button>Update</button>
5	Harthi	17	5463782988	<button>Update</button>



Profile

First name: Admin
Last name: Controller
Email: admin.controller@gmail.com
Role: ADMIN

You are not allowed to change role



Database storage:

MySQL Workbench

Local instance MySQL80 - W...

File Edit View Query Database Server Tools Scripting Help

Navigator

Schemas

- Filter objects
- bus_booking
 - booking
 - bus
 - passenger
 - users
 - Views
 - Stored Procedures
 - Functions
 - emp_details
 - employ_details
 - employee
 - employee_db
 - employee_details
 - login_system
 - mongo_db
 - my_practice
 - onetoone
 - native_database
 - Administration
 - Schemas

No object selected

Query 1

Limit to 1000 rows

```
98 SET foreign_key_checks = 1;
99 Truncate table users_roles;
100 SELECT * FROM roles;
101 SELECT * FROM users;
102 SELECT * FROM appointment;
103 SELECT * FROM doctor;
104 SELECT * FROM medicine;
105 SELECT * FROM patient;
106 SELECT * FROM users_roles;
107
108 SELECT * FROM user;
109
110 SELECT * FROM passenger;
```

	id	email_id	first_name	last_name	password	role
1	admin.controller@gmail.com	Admin	Controller	\$2a\$10\$C0KLnq7YveFYGt13G2bVZ..v10K9BFL...	ADMIN	
2	dheebigaramesh@gmail.com	Dheebiga	Ramesh	\$2a\$10\$U00..3gUSDR0W4Fv98q4uCaEozAA3...	USER	
3	vignesh@gmail.com	Vignesh	Ramesh	\$2a\$10\$aJsd0nUesGCHyVzEHvO8y7T2944...	USER	
4	123@gmail.com	Ramesh	Selvam	\$2a\$10\$Ctyf6pPrHtd3YhV3y4terRmxUzpV3c...	USER	
5	verni@gmail.com	Halley	Barajas	\$2a\$10\$P4MD36F9QZfR9uZvaRnM.YjdWjvKO...	USER	

users 19

Output

Action Output

Message

Duration / Fetch

SQL Additions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

MySQL Workbench

Local instance MySQL80 - W... x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHMAS

Filter objects

bus_booking

Tables

booking

bus

passenger

users

Views

Stored Procedures

Functions

emp_details

employee

employee_db

employee_details

login_system

mongo_db

my_practice

onetime

native database

Administration Schemas

Information

No object selected

Query 1

Truncate table users_roles;

SELECT * FROM roles;

SELECT * FROM users;

SELECT * FROM appointment;

SELECT * FROM doctor;

SELECT * FROM medicine;

SELECT * FROM patient;

SELECT * FROM users_roles;

SELECT * FROM users;

SELECT * FROM passenger;

Result Grid

	id	passenger_age	passenger_detail	passenger_name
1	23	7538818752	Dheebiga R	
2	24	7538818753	Vignesh R	
3	27	9570054673	Vennila R	
4	49	9442844976	Ramesh	
5	17	5463782988	Harthi	

passenger 20 x

Output

Action Output

Query Completed

30°C Partly cloudy

Search

ENG IN

10:29 PM 05-09-2024

MySQL Workbench

Local instance MySQL80 - W... x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHMAS

Filter objects

bus_booking

Tables

booking

bus

passenger

users

Views

Stored Procedures

Functions

emp_details

employee

employee_db

employee_details

login_system

mongo_db

my_practice

onetime

native database

Administration Schemas

Information

No object selected

Query 1

SELECT * FROM users;

SELECT * FROM appointment;

SELECT * FROM doctor;

SELECT * FROM medicine;

SELECT * FROM patient;

SELECT * FROM users_roles;

SELECT * FROM users;

SELECT * FROM passenger;

SELECT * FROM bus;

Result Grid

	bus_id	arrival_time	available_seat	bus_class	bus_fare	bus_name	date	departure_time	seat_count	terminal_from	terminal_to
1	10:00AM	19	EXPRESS	500	SETC	2024-09-07	10:30AM	34	VELLORE	CHENNAI	
3	6:00AM	31	AC SLEEPER	400	EX-9098	2024-09-10	6:30AM	34	Trupath	CHENNAI	

bus 21 x

Output

Action Output

Query Completed

30°C Partly cloudy

Search

ENG IN

10:30 PM 05-09-2024

MySQL Workbench

Local instance MySQL80 - W... x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHMAS

Filter objects

▼ bus_booking

- Tables
 - booking
 - bus
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- Views
- Stored Procedures

Functions

- emp_details
- employee
- employee_db
- employee_details
- login_system
- mongo_db
- my_practice
- onetoone
- nutriment_database

Administration Schemas

Information

No object selected

Query 1

Limit to 1000 rows

```
103 * SELECT * FROM doctor;
104 * SELECT * FROM medicine;
105 * SELECT * FROM patient;
106 * SELECT * FROM users_roles;
107
108 * SELECT * FROM users;
109
110 * SELECT * FROM passenger;
111
112 * SELECT * FROM bus;
113
114 * SELECT * FROM bookings;
115
```

Result Grid

	booking_id	available_seats	fare	seat_count	status	bus_id	passenger_id
▶	1	30	2000	4	Booked successfully	1	1
	2	28	1000	2	Booked successfully	1	2
	3	24	2000	4	Booked successfully	1	2
	4	19	2500	5	Booked successfully	1	3
	5	31	1200	3	Booked successfully	3	2
*	max	max	max	max	max	max	max

booking22 x

Output

Action Output

Time Action Message Duration / Fetch

11 15:31:03 SQL OK - EDI OK - EDI OK - LIMIT 0 1000 0.000 sec / 0.000 sec

Query Completed

30°C Partly cloudy

Search

ENG IN 10:30 PM 05-09-2024

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.