

## Read Me:

- The project is built on the Java, Spring boot
- The database is the H2 database.

## Requirements:

- You need IntelliJ Idea and postman
- Install JDK – 17
- Download the project from Github
- Build the project and run
- Exposed port is 8080(by default)
- Hit the API through postman and you will get the result there.

## Problem:

- I want to create an online scheduler website for the car service agency. The agency has many service operators who must take in appointments for customers for a limited time.
- A Service operator can take 1-hour appointments for all 24 hours, and they are available 24 x 7 x 365 days (sorry no vacation for them).
- If a Service operator is booked for a specific time slot, he obviously cannot take any more customer appointments.
- I want to be able to do the following:
  - Ability to 'book' an appointment slot by specific Operator **or any**
  - Ability to '**reschedule**' or 'cancel' appointment
  - Ability to show all booked appointments of an operator. This should display all individual appointments i.e. 1-2, 2-3, 3-4
  - Ability to show open slots of appointments for an operator. This should merge all consecutive open slots and show as 4-14 instead of 4-5, 5-6 ... 13-14.

## Assumptions:

- Number of service operators can be any.
- The booking is done for one hour by the customer (by default).
- 24 hour format is used to specify the time.

## The following APIs are implemented here:

### 1. Make a service operator

Request: POST

URL: {url}/api/operators

Request Parameters:

**name:** name of the operator(have to pass)

Service Operator Online Appointment / **Post a Service Operator** Save

**POST** ▼ http://localhost:8080/api/operators?name=Trapti Send ▼

Params ● Authorization Headers (7) Body Pre-request Script Tests ● Settings Cookies

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	name	Trapti			
	Key	Value	Description		

Body Cookies Headers (5) Test Results (0/1) 🌐 Status: 201 Created Time: 9 ms Size: 198 B 📄 Save as example ⋮

Pretty Raw Preview Visualize Text ▼ 🔍

```
1 Operator created successfully
```

## 2. Get all service operator

Request: GET

URL : {url}/api/oerators

Service Operator Online Appointment / **Get all service operator** Save

**GET** ▼ http://localhost:8080/api/operators Send ▼

Params ● Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

<input type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input type="checkbox"/>	name	Trapti			
	Key	Value	Description		

Body Cookies Headers (5) Test Results 🌐 Status: 200 OK Time: 609 ms Size: 240 B 📄 Save as example ⋮

Pretty Raw Preview Visualize JSON ▼ 🔍

```
1 [
2   {
3     "id": 1,
4     "name": "Trapti"
5   },
6   {
7     "id": 2,
8     "name": "Trapti"
9   },
10  ]
```

🔗 Postbot 🏃 Runner 🚀 Start Proxv 🍪 Cookies 🗑️ Trash

### 3. Make a booking/appointment

Request: POST

URL: {url}/api/booking

Request Parameter:

**date:** date of the appointment(has to pass)

**start\_time:** start\_time of the appointment(has to pass)

**service\_operator\_id:** operator id(optional)

(if service\_operator\_id will not pass then any operator id is taken at random)

The screenshot shows a REST client interface with the following details:

- Method:** POST
- URL:** http://localhost:8080/api/booking?date=2024-03-7&start\_time=0
- Query Params:**

Key	Value	Description
date	2024-03-7	
start_time	0	
service_operator_id	1	
- Status:** 201 Created
- Time:** 15 ms
- Size:** 203 B
- Response:** Appointment scheduled successfully

### 4. GET all the bookings

Request: GET

URL: {url}/api/booking

Service Operator Online Appointment / **Get all Booking**

GET http://localhost:8080/api/booking **Send**

Params Authorization Headers (6) Body Pre-request Script Tests Settings **Cookies**

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (5) Test Results **Status: 200 OK Time: 20 ms Size: 794 B Save as example**

Pretty Raw Preview Visualize JSON **Send**

```
1 [
2   {
3     "id": 1,
4     "operatorId": 1,
5     "date": "2024-03-06T18:30:00.000+00:00",
6     "startTime": 23,
7     "endTime": 24
8   },
9   {
10    "id": 2,
11    "operatorId": 2,
12    "date": "2024-03-06T18:30:00.000+00:00",
13    "startTime": 23,
14    "endTime": 24
15  },
16  ]
```

## 5. GET a booking by Id

Request: GET

URL: {url}/api/booking/{id}

Service Operator Online Appointment / **Get Booking by ID**

GET http://localhost:8080/api/booking/1 **Send**

Params Authorization Headers (6) Body Pre-request Script Tests Settings **Cookies**

Query Params

Key	Value	Description	...	Bulk Edit
Key	Value	Description		

Body Cookies Headers (5) Test Results **Status: 200 OK Time: 114 ms Size: 254 B Save as example**

Pretty Raw Preview Visualize JSON **Send**

```
1 {
2   "id": 1,
3   "operatorId": 1,
4   "date": "2024-03-06T18:30:00.000+00:00",
5   "startTime": 23,
6   "endTime": 24
7 }
```

## 6. DELETE a booking

Request: DELETE

URL: {url}/api/booking/{id}

Service Operator Online Appointment / Delete Booking By Id

DELETE http://localhost:8080/api/booking/1 Send

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

	Key	Value	Description	...	Bulk Edit
	Key	Value	Description		

Body Cookies Headers (5) Test Results Status: 200 OK Time: 1277 ms Size: 196 B Save as example

Pretty Raw Preview Visualize Text

1 Appointment deleted successfully

## 7. Reschedule a booking/appointment

Request: PUT

URL: {url}/api/booking/{id}

Request Parameter:

**date:** date of the original appointment (has to pass)

**start\_time:** start\_time of the original appointment (has to pass)

**date\_new:** date of the new appointment (has to pass)

**start\_time\_new:** start\_time of the new appointment (has to pass)

Service Operator Online Appointment / Reschedule the booking

PUT http://localhost:8080/api/booking/1?date=2024-03-07&start\_time=7&date\_new=2024-04-11&start\_time\_new=11 Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	date	2024-03-07			
<input checked="" type="checkbox"/>	start_time	7			
<input checked="" type="checkbox"/>	date_new	2024-04-11			
<input checked="" type="checkbox"/>	start_time_new	11			
	Key	Value	Description		

Body Cookies Headers (5) Test Results Status: 200 OK Time: 85 ms Size: 200 B Save as example

Pretty Raw Preview Visualize Text

1 Appointment rescheduled successfully

## 8. Get all the booked slots of an operator

Request: GET

URL: {url}/api/booking/bookedSlots/{operator\_id}

Request Parameter:

**date:** particular date for appointments (has to pass)

Service Operator Online Appointment / Get the booked slot of an operator

GET http://localhost:8080/api/booking/bookedSlots/?date=2024-03-07

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	date	2024-03-07			
	Key	Value	Description		

Body Cookies Headers (5) Test Results Status: 200 OK Time: 19 ms Size: 230 B Save as example

Pretty Raw Preview Visualize Text

```
1 The bookings for the given operator are: 0-1, 2-3, 3-4, 6-7, 23-24
```

## 9. Get all the open slots of an operator

Request: GET

URL: {url}/api/booking/openSlots/{operator\_id}

Request Parameter:

**date:** particular date for open slots (has to pass)

Service Operator Online Appointment / Get the open slots of an operator

GET http://localhost:8080/api/booking/openSlots/?date=2024-03-07

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

<input checked="" type="checkbox"/>	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	date	2024-03-07			
	Key	Value	Description		

Body Cookies Headers (5) Test Results Status: 200 OK Time: 18 ms Size: 211 B Save as example

Pretty Raw Preview Visualize Text

```
1 The open slots for the given operator: 1-2, 4-6
```