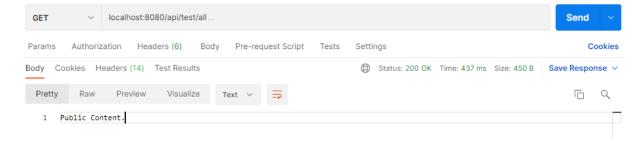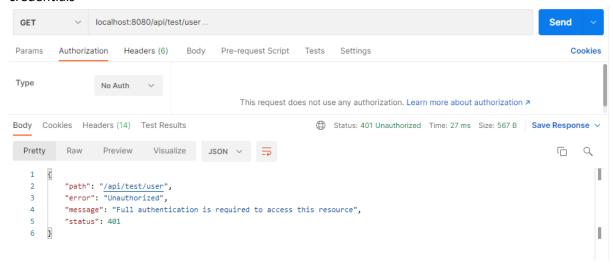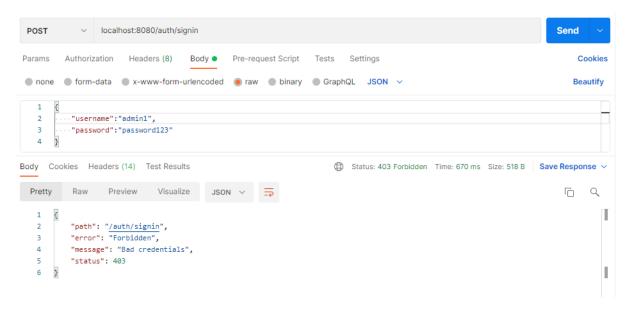GET localhost:8080/api/test/all – Test if exposed API is working without any credentials
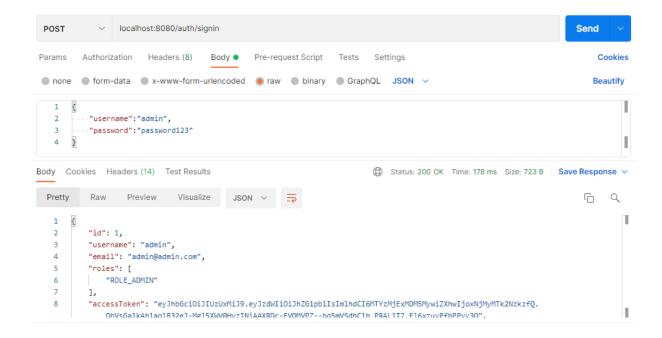
| GET | ∨ | localhost:8080/api/test/all ... | | Send | ∨ |

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

Body   Cookies   Headers (14)   Test Results   ⊕   Status: 200 OK   Time: 437 ms   Size: 450 B   Save Response ∨

Pretty   Raw   Preview   Visualize   Text ∨   ⇥

```
1    Public Content.
```

GET localhost:8080/api/test/user – Test API with credentials required is accessible without credentials

| GET | ∨ | localhost:8080/api/test/user ... | | Send | ∨ |

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

Type   No Auth ∨

                                                This request does not use any authorization. Learn more about authorization ↗

Body   Cookies   Headers (14)   Test Results   ⊕   Status: 401 Unauthorized   Time: 27 ms   Size: 567 B   Save Response ∨

Pretty   Raw   Preview   Visualize   JSON ∨   ⇥

```
1    {
2        "path": "/api/test/user",
3        "error": "Unauthorized",
4        "message": "Full authentication is required to access this resource",
5        "status": 401
6    }
```

POST localhost:8080/auth/signin – unregistered sign in, status code 403

| POST | ∨ | localhost:8080/auth/signin | | Send | ∨ |

Params   Authorization   Headers (8)   Body ●   Pre-request Script   Tests   Settings   Cookies

● none   ● form-data   ● x-www-form-urlencoded   ● raw   ● binary   ● GraphQL   JSON ∨   Beautify

```
1    {
2    ····"username":"admin1",
3    ····"password":"password123"
4    }
```

Body   Cookies   Headers (14)   Test Results   ⊕   Status: 403 Forbidden   Time: 670 ms   Size: 518 B   Save Response ∨

Pretty   Raw   Preview   Visualize   JSON ∨   ⇥

```
1    {
2        "path": "/auth/signin",
3        "error": "Forbidden",
4        "message": "Bad credentials",
5        "status": 403
6    }
```

POST localhost:8080/auth/signin – success sign in status code 200

```
POST ∨   localhost:8080/auth/signin                              Send ∨

Params   Authorization   Headers (8)   Body ●   Pre-request Script   Tests   Settings        Cookies

○ none  ○ form-data  ○ x-www-form-urlencoded  ● raw  ○ binary  ○ GraphQL   JSON ∨         Beautify

1  {
2      "username":"admin",
3      "password":"password123"
4  }

Body   Cookies   Headers (14)   Test Results        Status: 200 OK  Time: 178 ms  Size: 723 B   Save Response ∨

Pretty   Raw   Preview   Visualize   JSON ∨

1  {
2      "id": 1,
3      "username": "admin",
4      "email": "admin@admin.com",
5      "roles": [
6          "ROLE_ADMIN"
7      ],
8      "accessToken": "eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pbiIsImlhdCI6MTYzMjExMDM5MywiZXhwIjoxNjMyMTk2NzkzfQ.
           QhVsGa1kAh1aolB32eJ-Mø15XWV0Hv7TNiAAXRDc-FVQMVP7--bq5mVSdhC1b_PRAL1T7_F16x7uvPfhPPvv3Q",
```

GET localhost:8080/api/test/user - After using Bearer token generated while sign in


```
GET ∨   localhost:8080/api/test/user                            Send ∨

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

Type          Bearer T... ∨    Token                            eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pb... 

The authorization header will be

Body   Cookies   Headers (14)   Test Results        Status: 200 OK  Time: 30 ms  Size: 448 B   Save Response ∨

Pretty   Raw   Preview   Visualize   Text ∨

1  User Content.
```

POST localhost:8080/auth/signup


```
POST ∨   localhost:8080/auth/signup                             Send ∨

Params   Authorization   Headers (8)   Body ●   Pre-request Script   Tests   Settings        Cookies

○ none  ○ form-data  ○ x-www-form-urlencoded  ● raw  ○ binary  ○ GraphQL   JSON ∨         Beautify

1  {
2      "username":"harshil1",
3      "email":"harshil1@pass.com",
4      "password":"password1",
5      "role":["ADMIN"]
6  }

Body   Cookies   Headers (14)   Test Results        Status: 200 OK  Time: 243 ms  Size: 478 B   Save Response ∨

Pretty   Raw   Preview   Visualize   JSON ∨

1  {
2      "message": "User registered successfully!"
3  }
```

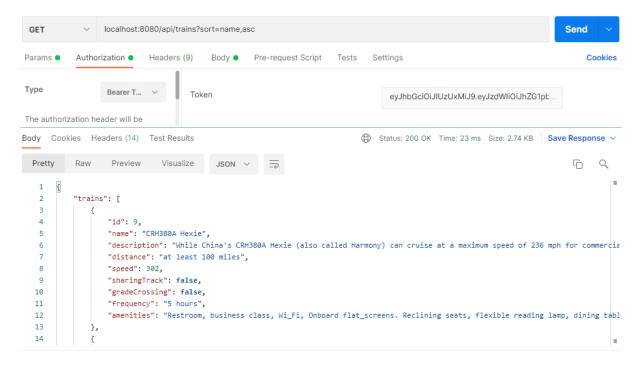GET localhost:8080/api/trains – GET trains without bearer token (without authorization)

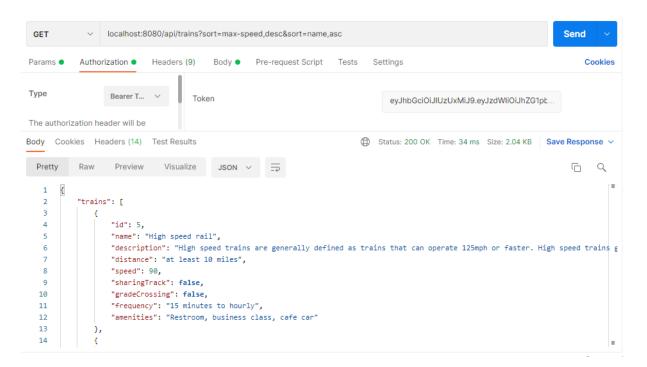GET localhost:8080/api/trains – GET trains with bearer token (with authorization)

Without any parameters (Return Code 200 with additional fields)

Default parameters - sort by id, descending & pagination page=0, size=3

sort=name,asc – pagination will be default

sort=max-speed,desc&sort=name,asc – multiple sorting default pagination
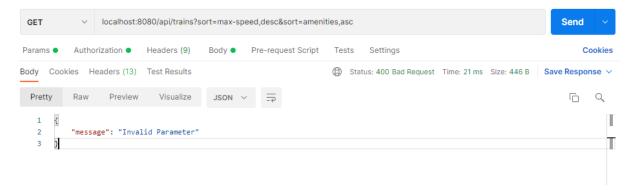

page=1&size=5&sort=max-speed,desc&sort=name,asc – sort and custom pagination

```
GET      ∨   localhost:8080/api/trains?page=1&size=5&sort=max-speed,desc&sort=name,asc        Send  ∨

Params ●   Authorization ●   Headers (9)   Body ●   Pre-request Script   Tests   Settings              Cookies

Body   Cookies   Headers (14)   Test Results          ⊕  Status: 200 OK  Time: 21 ms  Size: 4.58 KB   Save Response ∨

Pretty   Raw   Preview   Visualize    JSON  ∨  ⇥⊋                                                    ⎘   ⚲

 1  {
 2      "trains": [
 3          {
 4              "id": 7,
 5              "name": "L0 Series Maglev",
 6              "description": "This Japanese train, which is currently being developed and tested by the Central Japan Railway Company
 7              "distance": "at least 100 miles",
 8              "speed": 374,
 9              "sharingTrack": false,
10              "gradeCrossing": false,
11              "frequency": "6 hours",
12              "amenities": "Restroom, business class, cafe car, Wi_Fi, Onboard flat_screens. Reclining seats, flexible reading lamp."
13          },
14          {
15              "id": 8,
16              "name": "TGV POS",
17              "description": "France has had high_speed rail travel dialed in for many years. And in 2007, the TGV POS set the world s
18              "distance": "at least 150 miles",
19              "speed": 357,
```

Return Code 400 with Invalid parameter message(While trying to sort using fields other than id, name, max-speed

When sort with parameter not supported for example: "amenities"


```
GET      ∨   localhost:8080/api/trains?sort=max-speed,desc&sort=amenities,asc        Send  ∨

Params ●   Authorization ●   Headers (9)   Body ●   Pre-request Script   Tests   Settings              Cookies

Body   Cookies   Headers (13)   Test Results          ⊕  Status: 400 Bad Request  Time: 21 ms  Size: 446 B   Save Response ∨

Pretty   Raw   Preview   Visualize    JSON  ∨  ⇥⊋                                                    ⎘   ⚲

 1  {
 2      "message": "Invalid Parameter"
 3  }
```

Click on run button in IntelIJ besides DemoApplication class to run the project for the first time

```java
@SpringBootApplication
public class DemoApplication {

    public static void main(String[] args) { SpringApplication.run(DemoApplication.class, args); }

    @Bean
    CommandLineRunner init(AuthController authController) {
        return args -> {
            Set<String> roles = new HashSet<>();
            roles.add("ADMIN");
            User user = new User( username: "admin",  email: "admin@admin.com",  password: "password123");
            authController.registerUser(new SignupRequest(user.getUsername(), user.getEmail(), roles, user.getPass
```