

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

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

- Method:** GET
- URL:** localhost:8080/api/test/all ...
- Buttons:** Send, Params, Authorization, Headers (6), Body, Pre-request Script, Tests, Settings, Cookies.
- Response:** Status: 200 OK, Time: 437 ms, Size: 450 B. The response body is displayed in 'Text' format as "Public Content."

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

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

- Method:** GET
- URL:** localhost:8080/api/test/user ...
- Buttons:** Send, Params, Authorization, Headers (6), Body, Pre-request Script, Tests, Settings, Cookies.
- Authorization:** Type is set to 'No Auth'.
- Response:** Status: 401 Unauthorized, Time: 27 ms, Size: 567 B. The response body is displayed in 'JSON' format as:

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

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

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

- Method:** POST
- URL:** localhost:8080/auth/signin
- Buttons:** Send, Params, Authorization, Headers (8), Body, Pre-request Script, Tests, Settings, Cookies, Beautify.
- Body:** The request body is displayed in 'JSON' format as:

```
{  "username": "admin1",  "password": "password123"}
```
- Response:** Status: 403 Forbidden, Time: 670 ms, Size: 518 B. The response body is displayed in 'JSON' format as:

```
{  "path": "/auth/signin",  "error": "Forbidden",  "message": "Bad credentials",  "status": 403}
```

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.eyJzdWIiOiJhZG1pbSI6Im1ldCI6MTYzMTExMDUyZWZlbnRlbnQyMyMTk2NzZzZDQybmVzG1kAh1an1R32e1-Me15XkV0Hv7TNiAAXR0c-FVQWVP7--hn5mVSdhC1h PRAI 1T7 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 Token eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pbSI6Im1ldCI6MTYzMTExMDUyZWZlbnRlbnQyMyMTk2NzZzZDQybmVzG1kAh1an1R32e1-Me15XkV0Hv7TNiAAXR0c-FVQWVP7--hn5mVSdhC1h PRAI 1T7 F16x7uvPfhPPvv3Q

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": "harshill",
3   "email": "harshill@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)

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

- Method:** GET
- URL:** localhost:8080/api/trains
- Authorization:** No Auth (selected)
- Status:** 401 Unauthorized
- Time:** 11 ms
- Size:** 564 B
- Response Body (JSON):**

```
{  "path": "/api/trains",  "error": "Unauthorized",  "message": "Full authentication is required to access this resource",  "status": 401}
```

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

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

- Method:** GET
- URL:** localhost:8080/api/trains
- Authorization:** Bearer Token (selected)
- Token:** eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1kaW9...
- Status:** 200 OK
- Time:** 35 ms
- Size:** 2.75 KB
- Response Body (JSON):**

```
{  "id": 10,  "name": "Shanghai Maglev",  "description": "Similar to Japan's L0 Series, the Shanghai maglev (also called the Shanghai Transrapid) is a magnetic levitation train that operates out of Shanghai, China. And while it lands solidly at number four on this list, thanks to a top speed of 268 mph, it's actually the oldest commercial maglev train still in operation. If you fly into Shanghai Pudong International Airport, riding this train is easy. You can hop off in central Shanghai or take it all the way to the outskirts of central Pudong, where the line ends.",  "distance": "at least 100 miles",  "speed": 268,  "sharingTrack": false,  "gradeCrossing": false,
```

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

GET localhost:8080/api/trains?sort=name,asc

Send

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

Type Bearer T... Token eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pt...

The authorization header will be

Body Cookies Headers (14) Test Results Status: 200 OK Time: 23 ms Size: 2.74 KB Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "trains": [
3     {
4       "id": 9,
5       "name": "CRH380A Hexie",
6       "description": "While China's CRH380A Hexie (also called Harmony) can cruise at a maximum speed of 236 mph for commercial service, it is not yet in regular service. It is a high-speed train that can operate at speeds up to 300 km/h (186 mph).",
7       "distance": "at least 100 miles",
8       "speed": 302,
9       "sharingTrack": false,
10      "gradeCrossing": false,
11      "frequency": "5 hours",
12      "amenities": "Restroom, business class, Wi-Fi, Onboard flat_screens. Reclining seats, flexible reading lamp, dining table, power outlets, luggage storage, etc."
13    },
14  ]
15 }
```

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

GET localhost:8080/api/trains?sort=max-speed,desc&sort=name,asc

Send

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

Type Bearer T... Token eyJhbGciOiJIUzUxMiJ9.eyJzdWIiOiJhZG1pt...

The authorization header will be

Body Cookies Headers (14) Test Results Status: 200 OK Time: 34 ms Size: 2.04 KB Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "trains": [
3     {
4       "id": 5,
5       "name": "High speed rail",
6       "description": "High speed trains are generally defined as trains that can operate 125mph or faster. High speed trains are designed to run on tracks that are not used by conventional passenger trains.",
7       "distance": "at least 10 miles",
8       "speed": 90,
9       "sharingTrack": false,
10      "gradeCrossing": false,
11      "frequency": "15 minutes to hourly",
12      "amenities": "Restroom, business class, cafe car"
13    },
14  ]
15 }
```

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 IntelliJ besides DemoApplication class to run the project for the first time

```
@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
```