# Adviser Service API

**Artifact Attached: adviser-service-api.zip**

Adviser Service API provide capability to search advisers in shared datastore by using HTTP/Rest APIs. API expose following features for consumers:

| API Endpoint | Description | Example Request | Response |
|---|---|---|---|
| http://<server>/v1/advisers | List all advisers | http://localhost:8080/v1/advisers | [<br>{<br>"adviserId": "1",<br>"name": "Moore-Watson",<br>"address": "4 Mitchell turnpike, West Damianside, NN55 9UF",<br>"contactNumber": "+44(0) 289018562",<br>"organizationType": "charity",<br>"categories": [<br>"cat_crime"<br>]<br>},<br>{<br>"adviserId": "2",<br>"name": "Doyle PLC",<br>"address": "45 Brian hills, Leahport, G29 3HY",<br>"contactNumber": "+441632 960 169",<br>"organizationType": "mediation",<br>"categories": [<br>"cat_crime",<br>"cat_housing",<br>"cat_welfare_benefits"<br>]<br>}<br>] |
| http://<server>/v1/advisers/{id} | Get details of a single adviser by a unique ID. | http://localhost:8080/v1/advisers/1 | {<br>"adviserId": "1",<br>"name": "Moore-Watson",<br>"address": "4 Mitchell turnpike, West Damianside, NN55 9UF",<br>"contactNumber": "+44(0) 289018562",<br>"organizationType": "charity",<br>"categories": [<br>"cat_crime"<br>]<br>} |
| http://<server>/v1/advisers?orgType={orgType}&categoryName={categoryName} | Filter adviser data on organization types and categories. | http://localhost:8080/v1/advisers?orgType=mediation&categoryName=cat_welfare_benefits | [<br>{<br>"adviserId": "2",<br>"name": "Doyle PLC",<br>"address": "45 Brian hills, Leahport, G29 3HY",<br>"contactNumber": "+441632 960 169",<br>"organizationType": "mediation",<br>"categories": [<br>"cat_crime",<br>"cat_housing",<br>"cat_welfare_benefits"<br>]<br>},<br>{<br>"adviserId": "3",<br>"name": "Haynes-Holloway",<br>"address": "6 Carey ville, Lake Edwardborough, S4 9YJ",<br>"contactNumber": "+441632 960 169",<br>"organizationType": "mediation",<br>"categories": [<br>"cat_crime",<br>"cat_debt",<br>"cat_housing",<br>"cat_welfare_benefits"<br>]<br>}<br>] |

## Application Architecture

Application is developed using spring boot 2 as a primary framework. we are using 3 main components from spring boot, 1) Rest to expose controllers as a restful contract with HTTP request and response, 2) JPA - to provide capability to map database with the java entity and also enable query capabilities and 3) h2database to store adviser data in H2 in-memory database. data is loaded in-memory during the start-up from data.sql file in resource folder. H2 tables also created during the start-up by using entity class which are annotated with the correct mapping.

## Build

Service was developed using **Java 8, Spring Boot 2, H2 Database (in-memory)** and **Maven 3.6**. You need Java 8 and maven 3.6 installed locally to run this application.

To be able to run adviser-service-api app you will need to first build it. To build and package a Spring Boot app into a single executable Jar file with a Maven, first unzip attached adviser-service-api.zip file and then use the below command. You will need to run it from the project root folder:

> mvn clean install

## Run

You can now use following Maven command to run application. Use the below command to run your app with Maven plugin:

> mvn spring-boot:run

This will start your application and you should be able to see following output:

```
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 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
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 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::        (v2.1.8.RELEASE)

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.
2019-09-13 08:33:50.217  INFO 59909 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat
started on port(s): 8080 (http) with context path ''
2019-09-13 08:33:50.220  INFO 59909 --- [           main] c.m.a.s.a.AdviserServiceApiApplication   : Started
AdviserServiceApiApplication in 5.878 seconds (JVM ru
```
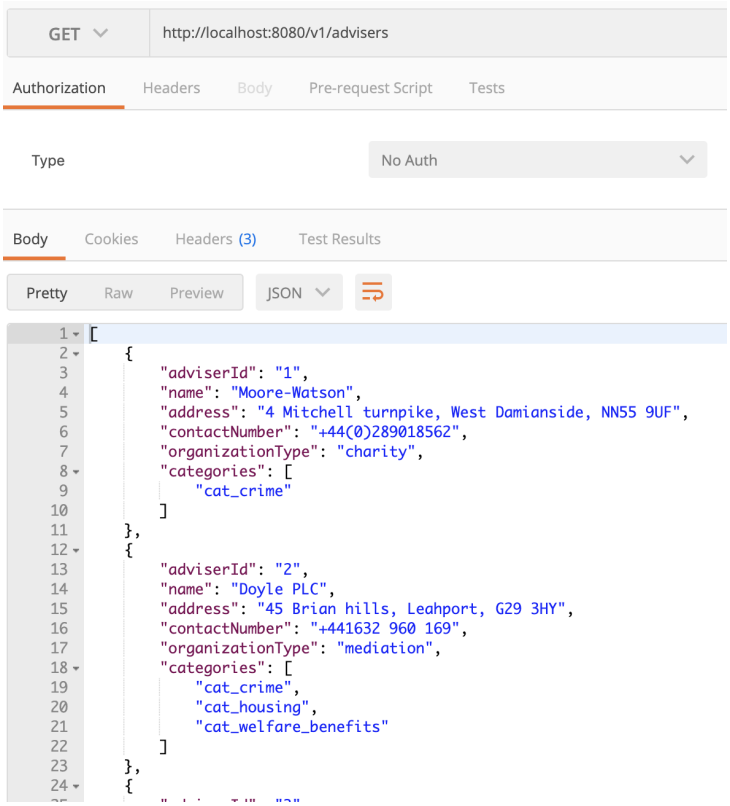

## Testing

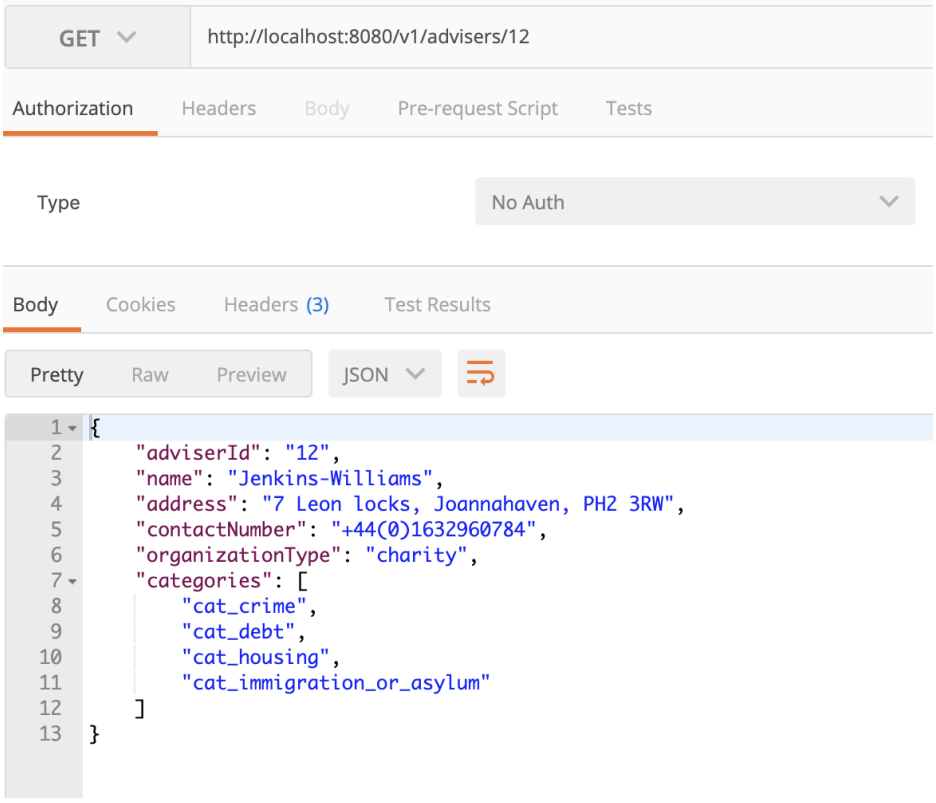
once application is up and running, you should be able to access following URL from your browser or any rest service tools such as Postman. http://localhost:8080/v1/advisers (replace localhost from your server name), this will give you json response for all adviser added to the database (H2)

following are couple of screenshots to show some running example:

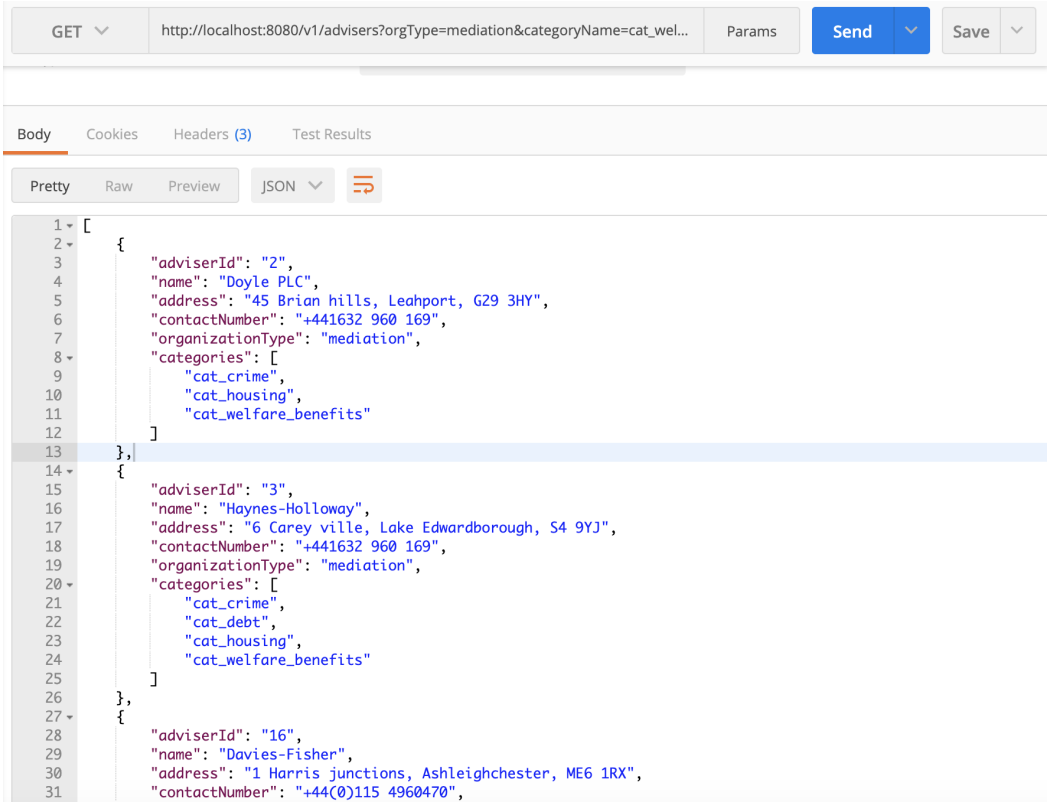
Getting all advisers:




Getting single adviser by using id:




Getting advisers by filtering using orgType and category:


GET
http://localhost:8080/v1/advisers?orgType=mediation&categoryName=cat_wel...
Params
Send
Save
Body
Cookies
Headers (3)
Test Results
Pretty
Raw
Preview
JSON
[
{
"adviserId": "2",
"name": "Doyle PLC",
"address": "45 Brian hills, Leahport, G29 3HY",
"contactNumber": "+441632 960 169",
"organizationType": "mediation",
"categories": [
"cat_crime",
"cat_housing",
"cat_welfare_benefits"
]
},
{
"adviserId": "3",
"name": "Haynes-Holloway",
"address": "6 Carey ville, Lake Edwardborough, S4 9YJ",
"contactNumber": "+441632 960 169",
"organizationType": "mediation",
"categories": [
"cat_crime",
"cat_debt",
"cat_housing",
"cat_welfare_benefits"
]
},
{
"adviserId": "16",
"name": "Davies-Fisher",
"address": "1 Harris junctions, Ashleighchester, ME6 1RX",
"contactNumber": "+44(0)115 4960470",