WAY2LEARN

LAB- Writing RAML and Consuming Restful Services with RAML definition

In this lab, you will be working on **02-consuming-rest-withraml-start** project under **02-consuming-webservices** section

In this lab you will understand

a) How to write RAML file

b) How to consuming a restful service with RAML Definition

STEP 1

In this step, you will understand how to write a RAML
We are going to develop a Rest API for a application called e-bookmobile application

1) Right click on src/main/api and click on a new-> "RAML Api Definition" and give the name as "ebookmobile.raml"

2) Give the base URI as baseUri: http://localhost:8081/ebookmobile/api
3) You want to describe 3 root resources as users,authors,books in your API. So, add them as

```
/users:
  displayName: Users Resource
/authors:
  displayName: Authos Resource
/books:
  displayName: Books Resource
```

4) You want an ability to search book by bookName and authors by authorName.

So, add subresource for /author/{authorName} and /books/{bookName}

```
/authors:
  displayName: Authors Resource
  /{authorName}:
    displayName: Authors by AuthorName
/books:
  displayName: Books Resource
  /{bookName}:
    displayName: Books by Book Name
```

5) You want an ability to do get,put,post on books collection. So, add those methods at /books level:

```
/books:
  displayName: Books Resource
  get:
    description:  GET all books
  put:
    description: Update books
  post:
    description: Create a new Book
  /{bookName}:
    displayName: Books by Book Name
```

6) Add query parameters like author.publicationYear,rating,isbn for GET /books.

Also, add a query parameter access_token for PUT /books

```
/books:
  displayName: Books Resource
  get:
    description:  GET all books
    queryParameters:
      author:
      publicationYear:
      rating:
      isbn:
  put:
    description: Update books
    queryParameters:
      access_token:
```

7) Now Specify attributes for each of the query parameters you defined above:

```
/books:
  displayName: Books Resource
  get:
    description:  GET all books
    queryParameters:
      author:
        displayName: Author
        description: Author's full Name
        type: string
        example: Siva Prasad
        required: false
      publicationYear:
        displayName:
        description:
        type: string
        required: false
        example: 2014
      rating:
      isbn:
```

8) Now, enter responses for /books/{bookTitle}

```
/{bookName}:
    displayName: Books by Book Name
    get:
      description: Retrieve a book by book tiltle
      responses:
        200:
          body:
            application/json:
              example: |
                {
                  "data": {
                    "id": "SbBGk",
                    "title": "Stiff: The Curious Lives of Human Cadavers",
                    "description": null,
                    "datetime": 1341533193,
                    "genre": "science",
                    "author": "Mary Roach",
                    "link": "http://e-bookmobile.com/books/Stiff",
                  },
                  "success": true,
                  "status": 200
                }
```

STEP 2

In this step, you will be working on **02-consuming-rest-withraml-start** project

In this step, you will understand how to consume a RestService which has RAML definition

1) Open productservice.raml and understand it

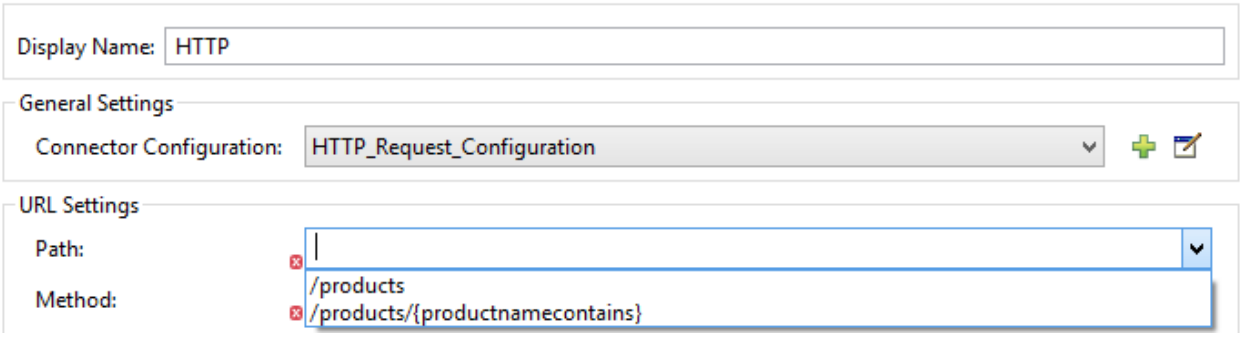
2) Open 02-consuming-rest-withraml-start.xml and configure a flow with http listener at port 8081 and path /products

Drap Http endpoint. Observe that this is Outbound (Http Requestor)

3) Create a new Request Connector Confuguration and give the RAML Location as productsservice.raml and press TAB.

Observe that Host,Port and Base Path are automatically populated. Press OK to close the POP up window.

4) Select the Drop Down button for path and observe that it shows all the available paths as shown below :



5) Select ./products . Now select the drop down for method. It shows only available methods "GET" and "POST" according to raml definition.

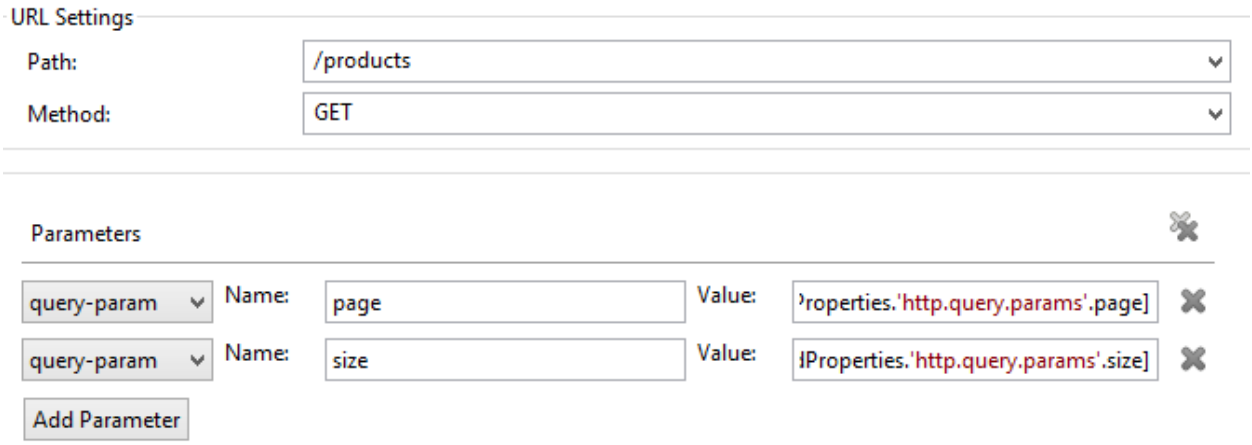
Select GET .

Noe run the application and give a request to http://localhost:8081/products and observe that all the products are displayed.

6) We want only first 3 products. So, if you give a request to http://localhost:8081/products? page=0&size=3 , it should display the first 3 products only.

Configure that Http out bound endpoint such that it will send the query parameters page and size to outbound request by extracting them from incoming request.

Hint : The configuration should look like below :



Give a request to http://localhost:8081/products? page=0&size=3 and check if you are getting first 3 products only.

Now remove the query params for outbound endpoint .

7) Now change the inbound endpoint path as /products/{productnamecontains} .

Configure out bound endpoint to make GET request to /products/{productnamecontains} . Configure productnamecontains as uri param for outbound request by extracting from inbound request.

Give a request to http://localhost:8081/products/Mac and check if you are getting only MAC products

This is the end of the Exercise