Objective

The objective of this workshop is to practice writing OpenAPI for an existing REST endpoint.

Workshop

Write an OpenAPI Specification for a REST endpoint

The `main.js` is a simple web application that exposes the following REST endpoints

- `GET /customers`
- `GET /customer/<customer_id>`
- `POST /customer`

The application uses a fake database (JSON array) with 3 customers; you can find their schema in `customerdb.js` along with some simple methods to manipulate this 'database'.

Write an OpenAPI specification for this endpoint in a file called `customer_oas.yaml`.

You can validate the OpenAPI specification with the following command

```
openapi-generator-cli validate \
    -i customer_oas.yaml
```

Use OpenAPI to Validate Request

Download Caddy Server (reverse proxy) from https://caddyserver.com/download with the OpenAPI module (`http.handlers.openapi`).

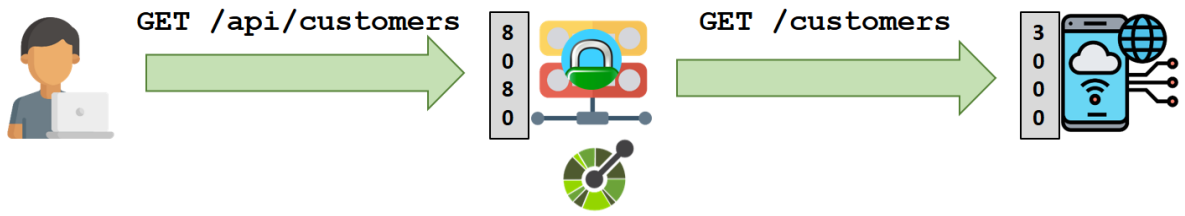
Start the web application

```
node main.js
```

Start Caddy server with the following command

```
caddy run -config ./Caddyfile
```

Caddy listens on port 8080 and forwards all request to the REST service listening on port 3000. See the following figure



Test the OpenAPI validation by using a REST client to call any of the 3 customer REST endpoint thru Caddy, for example

curl http://localhost:8080/api/customers

Caddy prefix all resource name with `/api`; so when you invoke, you will have to also prefix the resource name with `/api`. This is configurable in the Caddyfile allowing you to shape any resource without modifying the source code eg. different versions of customer API `/api/v1/customers` and `/api/v2/customers`.

Optional Workshop

Use the `openapi-generator-cli` to generate a client library of your choice. Write a simple program that uses the generated client to invoke the API.

For example, to generate Python client library in `/opt/tmp/src` directory

```
openapi-generator-cli generate \
    -i customer_oas.yaml \
    -g python \
    -o /opt/tmp/src
```

You can find a list of supported generates (client and server) from https://openapi-generator.tech/docs/generators

Submission

Create a Git repo for this course if you have not done so. Clone the Git repo. When you have completed this workshop perform a push to your remote repository.

```
git add .
git commit -m 'workshop02'
git push origin master
```