

# API Challenge

Create a RESTful API that allows the management of Merchants, and their location. The API will allow the Creation, Reading, Updating, and Deletion of a Merchant. It will also allow a user to retrieve a list of the nearest Merchants based on the latitude and longitude of a location.

To achieve this, the API should implement the following operations:

1. Create a new Merchant [POST]
2. Update an existing Merchant [PUT or PATCH]
3. Get a list of Merchants ordered by closest location [GET]
4. Get the details of a single Merchant [GET]
5. Delete a single Merchant [DELETE]

To calculate the distance between a supplied location and that of the Merchants, you should use the [Haversine](#) formula.

Here is the minimum required structure for the Merchant resource:

```
{
  "latitude": "52.986375",
  "longitude": "-6.043701",
  "merchantId": 12,
  "merchantName": "Tesco"
}
```

You are free to choose whatever technologies you wish to use.

Candidates should be prepared to:

- Rationalise the API design choices made
- Demonstrate the API in use
- Discuss the implemented API code
- Indicate areas of the API code that could be improved upon

## Extra Credit

Add authentication and authorization to the RESTful service. Only allow users who have authenticated with your service to use your API, and only allow users to access Merchants that they have created (authorization).

## Technology Suggestions

- Java / SpringBoot
- Nodejs / Express
- Python / FastAPI