SaaS Engineering: Final project
2017

Goals:
Apply all the concepts covered during the course by developing a SaaS application that interacts with an external API and Databases.
In this application, you will create new services that interact with the OpenWeatherMap api to provide weather related data to the clients.
Two main services are required for the application:

In this context, clients will make calls to your api like:
curl -X GET http://your-api-url:3000/wheater/now?lat=35%lon=139

Your service should return the response in a json format like this:

```
{
  "coord":{"lon":139,"lat":35},
  "country":"JP",
  "Sunrise":6am,
  "sunset":7pm,
  "weather":"overcast clouds",
  "Temp":289.5,
  "Humidity":89,
  "pressure":1013,
  "city":"Shuzenji",
  "Cod":200
}
```

After querying the weather api, your service should save the response to a mongoDB document with a format like shown above.
There is another api endpoint where you can query all the data saved in the mongoDB document:

curl -X GET http://your-api-url:3000/wheater/all

```
{
  “weater_data”: [{weather_obj1}, {weather_obj2}, {weather_objn}]
}
```

weather_obj1, weather_obj2, weather_objn are weather objects like described in the first endpoint

The project is divided in several parts:

Part 1: Setup Github:

- You need to create a new github account, if you don't already have one: https://github.com/
- Create a new repository to hold the application, or connect code anywhere to your github account.
- Setup the weather api keys: https://openweathermap.org/
- You will use the api to make the api calls to openweather map

Part 2: Create a new rails application and controllers:

- Create the app without active record, since we are using mongoDB as a data store: http://ianthro.com/using-mongodb-with-rails
- You will need to create a new rails application to build the services
- Install the necessary dependencies: For interacting with the weather api, we are using the library httparty: https://github.com/jnunemaker/httparty
- Create the controllers that provides the routes to your application: i.e: /weather

Part 3: Install and configure MongoDB

- Install MongoDB locally: https://www.mongodb.com/
- Add and install the mongoDB libraries and ORM:
- https://docs.mongodb.com/mongoid/master/tutorials/mongoid-installation/
- Install and configure your models to work with the new database

Part 4: Create models and query mongoDB:

- Create the necessary models to represent the data needed for the clients.
- Create the controllers or methods to query the data.

Part 5: Deploy the application to Heroku:

- Create the heroku account: https://signup.heroku.com/login
- Push and deploy your application

Part 6: Create the api client:

- Create an small client (any language or technology) to test your api endpoints.

After developing and deploying the application to Heroku, you should be able to access the api url and test it with your small api client.