Problem Chosen to solve:

Develop a REST application with an endpoint which returns current weather description of the city an end user would like to see.

High level steps :

1. Get the access api\_key of the OpenWeather API.
2. Integrate the application with the Open API.
3. Model the response from Open API and translate into weather Description.
4. Save the Open API response into H2 DB.
5. Retrieve the description from H2 and return to the user.

What has been implemented:

1. A rest endpoint fetching the response from H2 DB.
2. A service integrating with Open Weather API and saving the response to H2 DB.
3. An API Key scheme to allow only valid api\_key to access the application.
4. The api\_key is hard coded in the application.properties.

What else could have been done:

1. Implement API rate limiting using a custom filter and counter.
2. Test coverage could be improved
3. Validation of city , country codes against Open API specifications.