API Scavenger Hunt: Reflection
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1. Weather API:

The task was to retrieve weather data for London and a 5-day forecast for Tokyo. Signing up for the OpenWeatherMap API key was straightforward. The website provided clear instructions, and I was able to get my API key promptly after registration. This process was user-friendly and didn't require any complex steps. Firstly, I tested all my apis, after signing up using postman to see if the endpoint and the api key is working or not. After I got 200 success response, I decided to write the code in Java, as I am proficient in that programming language.

Because of the code's simple structure and use of Java's HttpClient and HttpRequest, I was able to concentrate on the features of the API rather than the details of HTTP in Java. The JSON format used by the API response is popular and simple to parse in Java. Regarding ease of use, OpenWeatherMap API is quite developer friendly. It provides clear documentation, and the endpoints are simple to use.

This API has a wide range of possible applications. It can be incorporated into applications for trip planning so that users can access real-time weather reports and forecasts for their destinations. Additionally, weather forecasts could be helpful in agriculture by advising farmers on the optimal times to grow and harvest crops.

2. Google Maps API:

I found the Google Maps API to be feature-rich and easy to utilize. With the help of thorough documentation, creating a map and obtaining an API key was an easy process. The robust abstractions in the API allowed for the implementation of a map with a center on New York and the plotting of a path between San Francisco and Los Angeles with minimal code. It is quite noteable how user-friendly the API is. With the help of the JavaScript library, complex functionality like map rendering and interactivity can be controlled by a small number of JavaScript objects and functions. For example, a few lines of code are all that’s needed to create a map with a specified center and zoom level.

The Google Maps API has a plethora of potential uses. The applications are nearly endless and range from business locators on company websites to travel apps that

offer route directions and real estate platforms that display property locations. For example, an app for tourism may make use of many APIs to improve the visitor experience by adding interactive maps and real-time navigation, or a logistics company could use the routing tools to optimize delivery routes.

3. Rest Countries API:

Using the REST Countries API was really easy. I didn't need a special key to get in, so I could get the information right away. The guide was easy to understand, so I quickly got the details about Brazil like how many people live there, how big it is, and what language they speak. Finding out about all the countries in Africa was just as simple. I used JSON parser, to parse through the huge response and display the required data in the output.

The API is great because it's so simple to use. It's perfect for school projects or making a quick demo. It can help any app that's about places around the world or a game that asks you about countries. It's very open, which is great for most people, but for really big or official apps, they might need something with more security.

4. Currency Converter API:

The only challenge I had to face in this task was to find an api, which gives me the api key instantly and allows me to perform the task. Took me some time, but I was finally able to find the api. The api that I used for this task is https://v6.exchangerateapi.com. Working with this api was pretty simple as well. Once I got my key, I could start changing money from one kind to another. To verify, I first tested all my apis on postman. All I had to do was tell it what kind of money I had, what I wanted to change it into, and how much. It was really just about making a quick call to the API for the numbers I needed. The API gave me the answers straight up, telling me how much the money was worth after changing it. It sent the information in a simple way that my Java program could read without any trouble. This API can handle lots of different types of money, which is great.

This tool could be super useful for apps that help you with money, like if you're planning how much to spend on a trip or if you're buying things from another country online. It makes things a lot easier because it does the hard work of figuring out the exchange rates for you.