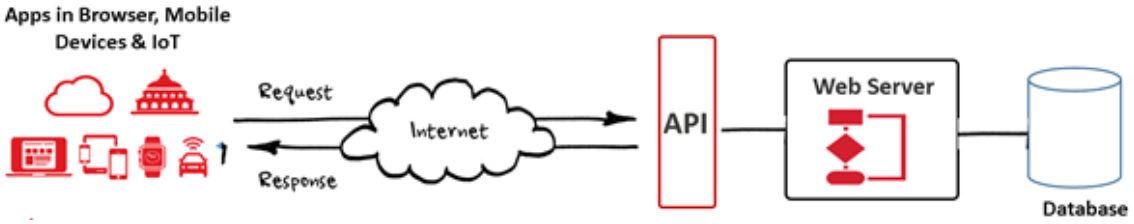
• Recapitulation of the topics from the lectures

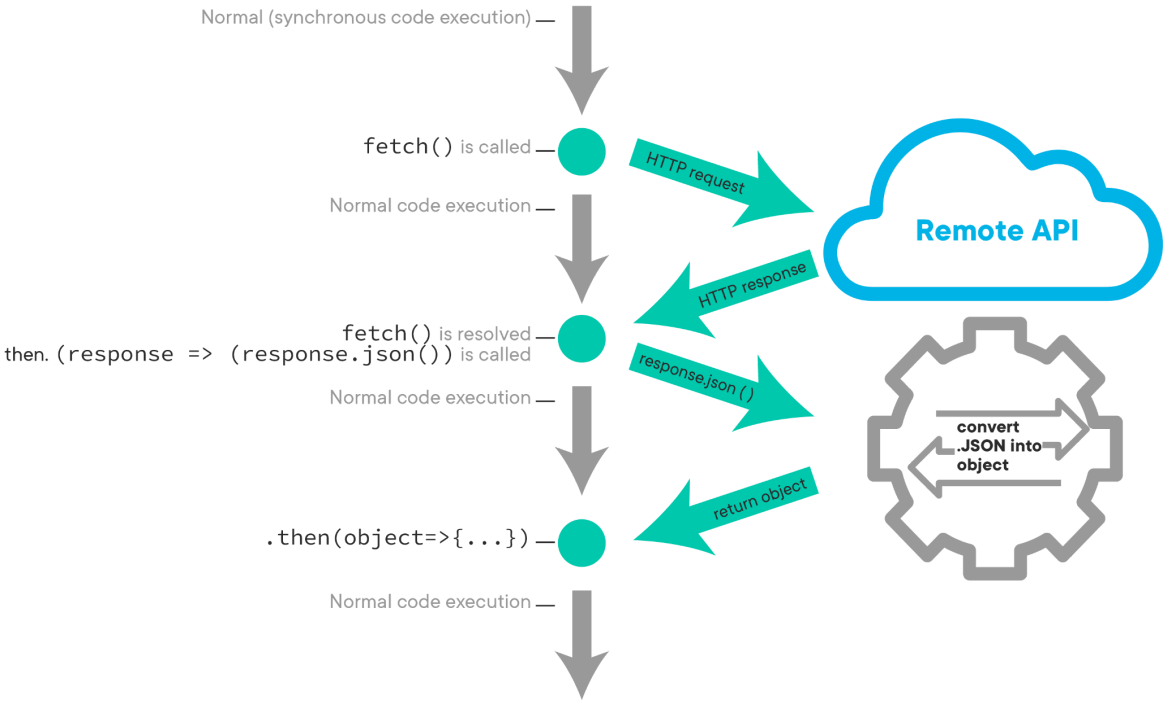
We learned about the usage of API (Application Programming Interface) from lectures, which I found really challenging. Therefore I looked up other materials to understand the concept better. Afterall, I found the below images that explained the flow better for me from a perspective of a beginner, rather than other tutorials or articles.



In short, API is a set of functions that allows applications to access data and interact with external software components, operating systems etc. As in the picture above, we have to make a “request” to send or receive the information that we need and this would be done by another programming language called JSON.

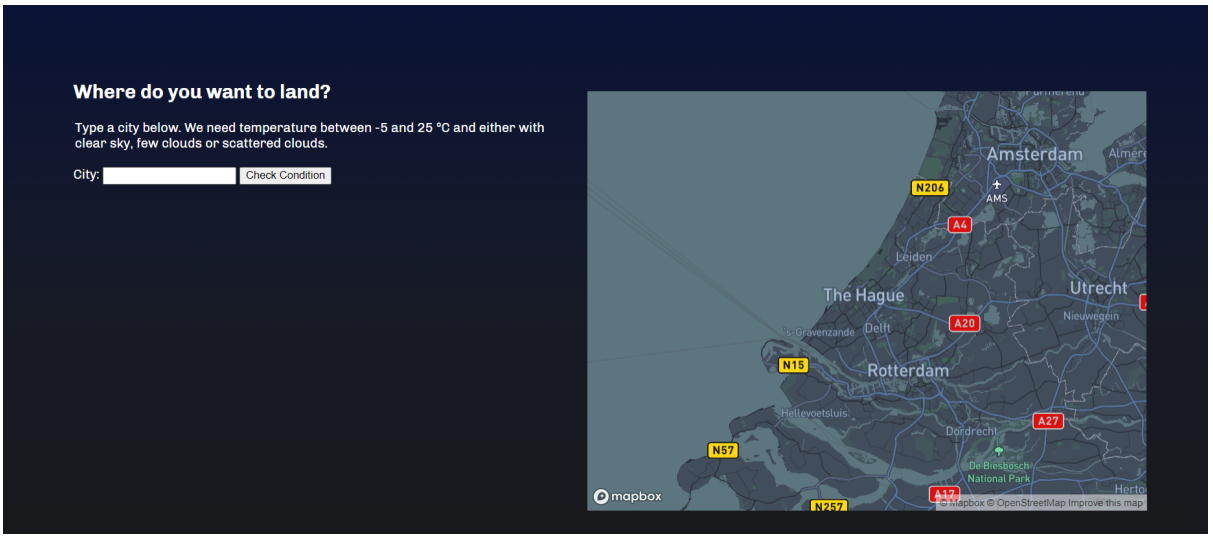
```
{
  "string": "Hi",
  "number": 2.5,
  "boolean": true,
  "null": null,
  "object": { "name": "Kyle", "age": 24 },
  "array": ["Hello", 5, false, null, { "key": "value", "number": 6 }],
  "arrayOfObjects": [
    { "name": "Jerry", "age": 28 },
    { "name": "Sally", "age": 26 }
  ]
}

```

To fetch resources from JSON, fetch() will be used in javascript.

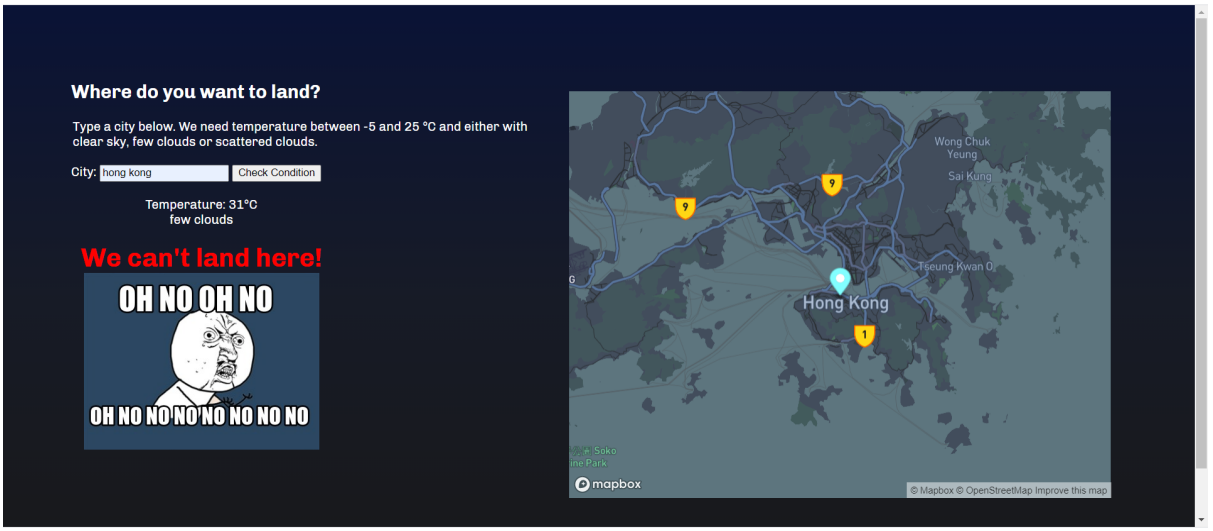


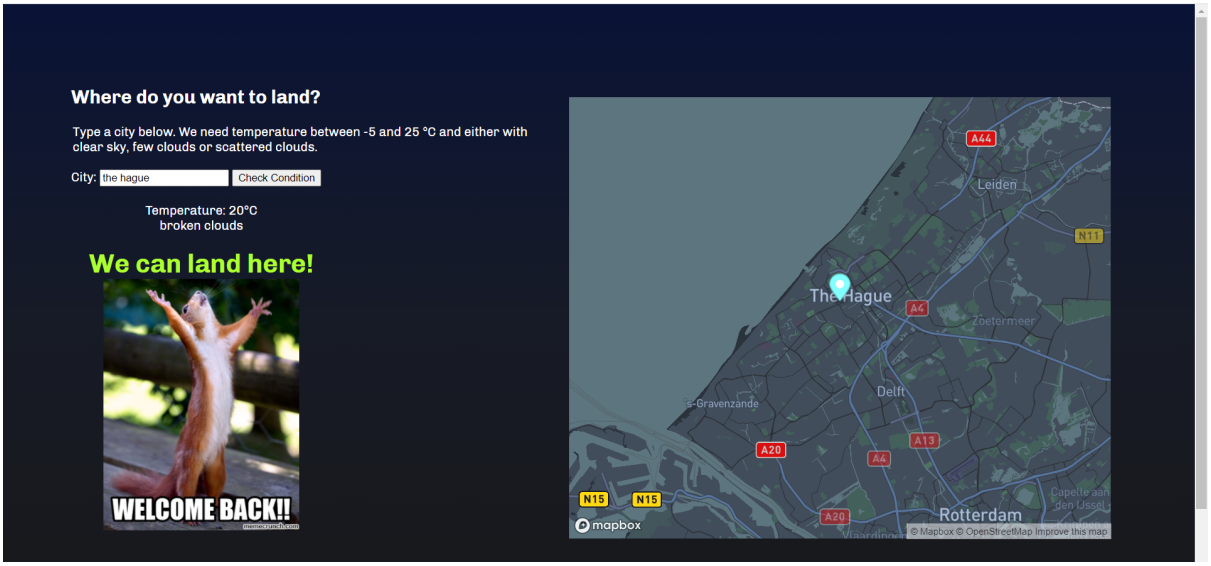
When we use the fetch() method to get the data, we should not forget to render the data and return it inside the assigned element in html file. On the other hand, there is a possibility of having a failure request and thus we also need to use the catch() method for handling this situation.

• About the assignment & what I tried to achieve
In this assignment, we need to provide an interactive platform to help finding a perfect spot to land a spaceship with the aid of API. Therefore, I have applied APIs from Openweather and Mapbox.
First of all, I customized the style for the map and initialized it for where user will see when the page is loaded. Then I set conditions of the temperature and cloudiness to decide a location for landing.



When the city name is valid, the map will be zoomed to that city and a marker will be shown; otherwise it will ask user to try again.

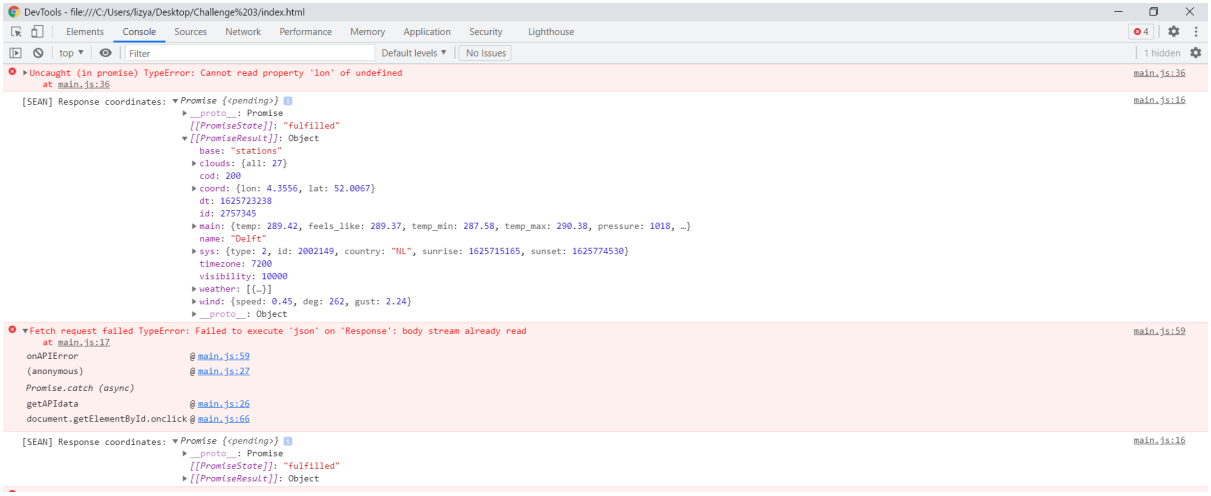




It actually took me quite a while to understand how to let the map fly to a new location based on the user's input. I found that in mapbox it has “flyto” which can execute it. However, with multiple trials, I realized it cannot respond to text (city name) but only the geographical coordinates. Therefore, I need to connect it to the result from openweather instead as the response itself isn’t only the weather but also lat and lon. It still took a lot of time as I wasn’t sure if I could successfully get the coordinates, but a good thing is that, I learned how to check by adding a console log. I know it has been mentioned before, but I didn’t get to understand how it helps, or let’s say even adding a console.log statement gave me some problems as well :D For example I didn’t change it to .json before logging it.

```
.then(function(response) {
  if(!response.ok) throw Error(response.statusText);
  console.log("[SEAN] Response coordinates:", response.body())
  return response.json();
})
```

Eventually, it was a lot of trying and editing but I’m glad that it works.



It was still pretty frustrating as what I wanted to do was a lot more than that, but I cannot figure out how to do it yet. For example, I wanted to add an image and the covid situation of the corresponding country from other APIs. I tried it for a few days and decided to give up due to the deadline.

Url: lizyau-challenge3.netlify.app