

Link: <https://kerwinteh.github.io/cs20/Assignment8/index.html>

## index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>APIs</title>
  <script src="index.js"></script>
  <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script
>
  <style>
    body {
      background-color: #2d2f45;
      color: white;
      width: 100%;
      display: flex;
      margin: 2%;
    }

    h2{
      background-color: #62b89d;
      border-radius: 25px;
      padding: 25px;
      width: 80%;
    }

    p {
      max-width: 70%;
    }

  </style>
</head>
<body>
<div>
  <h1>APIs</h1>
  <h2>Using AJAX</h2>
  <p id="AJAX"></p>
  <br/><br/>

  <h2>Using Fetch</h2>
  <p id="fetch"></p>
  <br/><br/><br/><br/><br/>
</div>
</body>
</html>
```

### API Results

This is CoinCap API. It gives real-time pricing and market activity for over 1000 cryptocurrencies.

API website: <https://docs.coincap.io/>

There are several options for this API. The one I used was the asset option where I can see a list of asset data they have. From there, I filtered the assets by id and used that to find bitcoin data such as its name, symbol and current real time price.

2 options where this could be useful is when trying to create a cryptocurrency trading app and when someone just simply wants to keep track of the bitcoin prices without having to go into an app everyday.

For example, by using this API, I can just open this website and check live bitcoin prices everyday!

### Question

The most challenging part about this assignment was figuring out how to access the element I wanted to

in the json object using javascript. The most satisfying part of this assignment was after I completed it and

refreshed, I saw the bitcoin prices actually changing according to real time and I didn't know it did that

prior to doing this assignment.

## index.js

```
//AJAX
const req = new XMLHttpRequest();
req.onreadystatechange = function () {
  if(req.readyState === 4 && req.status === 200) {
    const json = JSON.parse(req.responseText);
    $("#AJAX").append("Name: " + json.data[0]["id"] + "<br/>");
    $("#AJAX").append("Symbol: " + json.data[0]["symbol"] + "<br/>");
    price = parseInt(json.data[0]["priceUsd"]);
    $("#AJAX").append("Price (USD): " + price.toFixed(2));
  }
};
req.open("GET", "https://api.coincap.io/v2/assets?ids=bitcoin", true);
req.send();

fetch("https://api.coincap.io/v2/assets?ids=bitcoin")
  .then(res => res.json())
  .then(json => {
    $("#fetch").append("Name: " + json.data[0]["id"] + "<br/>");
    $("#fetch").append("Symbol: " + json.data[0]["symbol"] + "<br/>");
    price = parseInt(json.data[0]["priceUsd"]);
    $("#fetch").append("Price (USD): " + price.toFixed(2));
  })
})
```

## Using postman

The screenshot shows the Postman web interface in a browser. The workspace is named "prices - My Workspace". The current request is a GET request to the URL `https://api.coingecko.com/v2/assets?id=bitcoin`. The request is saved under the collection "Assignment8" with the name "prices".

The "Query Params" section is empty.

The "Body" section is selected, showing the response in JSON format. The response is a 200 OK status with a time of 305 ms and a size of 988 B. The response body is:

```
{
  "data": [
    {
      "id": "bitcoin",
      "rank": "1",
      "symbol": "BTC",
      "name": "Bitcoin",
      "supply": "19318218.098000000000000000",
      "maxSupply": "21000000.000000000000000000",
      "marketCapUsd": "476796090735.3023536037379474",
      "volumeUsd24Hr": "26177651848.3707024699454836",
      "priceUsd": "24681.1631764017961493",
      "changePercent24Hr": "-5.0951592015947088",
      "vwap24Hr": "24829.7450891915460946",
      "explorer": "https://blockchain.info/"
    }
  ]
}
```

At the bottom left, there is a progress bar for "Start working with APIs" at 67% and a "Show me" button. The bottom right shows status icons for Cookies, Auto-select agent, Runner, Trash, and a help icon.