HTML   CSS   JavaScript   jQuery   PHP   Bootstrap   NodeJS   ReactJS   AngularJS   ExpressJS

Create a chart from JSON data using Fetch GET request (Fetch API) in JavaScript

Last Updated : 29 Nov, 2021

In this article, we are going to create a simple chart by fetching JSON Data using **Fetch() method** of Fetch API. The Fetch API allows us to conduct HTTP requests in a simpler way.

The fetch() method: The fetch method fetches a resource thereby returning a promise which is fulfilled once the response is available.

Syntax:

```
const response = fetch(resource [, init])
```

Parameters:

- **resource:** The path of the resource(can also be a local file)
- **init:** Any further options you want to add such as headers, body, method, etc.

Approach: The steps can be described as below:

Step 1: The first step is to call the fetch function by specifying the path of the resource. In this example, we will be using the free resource from the URL as follows:

"https://datausa.io/api/data?drilldowns=Nation&measures=Population

Start Your Coding Journey Now!   Login   Register

type: "cors",

URL: "https://datausa.io/api/data?drilldowns=Nation&measures=Population",

redirected: false,

status: 200,

ok: true,

statusText: "OK",

headers: Headers,

body: ReadableStream,

bodyUsed: true

}

body: ReadableStream { locked: true }

bodyUsed: true

headers: Headers { }

ok: true

redirected: false

status: 200

statusText: "OK"

type: "cors"

url: "https://datausa.io/api/data?drilldowns=Nation&measures=Population"

<prototype>: ResponsePrototype { clone: clone(), arrayBuffer: arrayBuffer(),

blob: blob(), ... }

Step 2: We will then get a result in the stream of data. We are then viewing our JSON data which is as follows:

Object { data: (7) [...], source: (1) [...] }

data: Array(7) [{...}, {...}, {...}, ...]

0: Object {

"ID Nation": "01000US",

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our Cookie Policy & Privacy Policy

Got It !

Start Your Coding Journey Now!

"ID Year": 2019

Nation: "United States"

Population: 328239523

"Slug Nation": "united-states"

Year: "2019"

<prototype>: Object { ... }

1: Object {

"ID Nation": "01000US",

Nation: "United States",

"ID Year": 2018, ...

}

2: Object {

"ID Nation": "01000US",

Nation: "United States",

"ID Year": 2017, ...

}

3: Object {

"ID Nation": "01000US",

Nation: "United States",

"ID Year": 2016, ...

}

4: Object {

"ID Nation": "01000US",

Nation: "United States",

"ID Year": 2015, ...

}

5: Object {

"ID Nation": "01000US",

Nation: "United States",

"ID Year": 2014, ...

Start Your Coding Journey Now!

"ID Year": 2013, …

}

length: 7

<prototype>: Array []

source: Array [{…}]

<prototype>: Object { … }

As you can see we have an array of length 7. And each object has several properties. Out of these properties, we are just storing the two properties i.e., Year and Population into two different arrays by using a for loop.

Step 3: The final step is we are creating a chart from the data received. For doing so, we are using chart.js which is an easy way to include charts on our website. Add CDN link in your head tag

<script src="https://cdnjs.cloudflare.com/ajax/libs/Chart.js/2.9.4/Chart.js">

Below is the implementation of the above approach:

HTML

```html
<html>

<head>
    <script type="text/javascript" src=
"https://code.jquery.com/jquery-1.12.0.min.js">
    </script>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width,
                                   initial-scale=1">
    <script src=
"https://cdnjs.cloudflare.com/ajax/libs/Chart.js/2.5.0/Chart.min.js">
```

```html
<canvas id="bar-chart" width="800" height="450">
</canvas>
<script>

    getData();

    async function getData() {
        const response = await fetch(
'https://datausa.io/api/data?drilldowns=Nation&measures=Population');
        console.log(response);
        const data = await response.json();
        console.log(data);
        length = data.data.length;
        console.log(length);

        labels = [];
        values = [];
        for (i = 0; i < length; i++) {
            labels.push(data.data[i].Year);
            values.push(data.data[i].Population);
        }


        new Chart(document.getElementById("bar-chart"), {
            type: 'bar',
            data: {
                labels: labels,
                datasets: [
                    {
                        label: "Population (millions)",
                        backgroundColor: ["#3e95cd",
                                          "#8e5ea2",
                                          "#3cba9f",
                                          "#e8c3b9",
                                          "#c45850",
                                          "#CD5C5C",
                                          "#40E0D0"],
                        data: values
                    }
                ]
            },
            options: {
                legend: { display: false },
                title: {
```
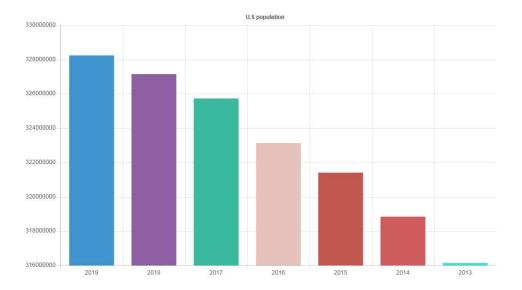
```
        }

    </script>
</body>

</html>
```

Output:

Like   2

Start Your Coding Journey Now!

RECOMMENDED ARTICLES   Page : **1** 2 3

01 Simple GET and POST request using
Fetch API method by making
custom HTTP library
21, Jul 20

02 Simple POST request using the
fetch API
22, May 20

03 How to make simple PUT request
using fetch API by making custom
HTTP library ?
17, Jul 20

04 Simple DELETE request using fetch
API by making custom HTTP library
21, Jul 20

05 How to use cURL to Get JSON Data
and Decode JSON Data in PHP ?
28, May 21

06 How to Use the JavaScript Fetch API
to Get Data?
28, May 20

07 How to use JavaScript Fetch API to
Get Data ?
07, Jan 21

08 HTTP Request vs HapiJS Request in
Node.js
14, Sep 20

Start Your Coding Journey Now!   Login   Register

namaldesign
@namaldesign

Vote for difficulty

| Easy | Normal | Medium | Hard | Expert |

Article Tags :   javascript-object,   JavaScript-Questions,   JavaScript,   Web Technologies

Improve Article   Report Issue

Writing code in comment? Please use **ide.geeksforgeeks.org**, generate link and share the link here.

Load Comments

A-143, 9th Floor, Sovereign Corporate Tower,
Sector-136, Noida, Uttar Pradesh - 201305

feedback@geeksforgeeks.org

Company   ## Learn

We use cookies to ensure you have the best browsing experience on our website. By using our
site, you acknowledge that you have read and understood our Cookie Policy & Privacy Policy   **Got It !**

Start Your Coding Journey Now!

Privacy Policy   CS Subjects

Copyright Policy   Video Tutorials

Courses

News   ## Languages

Top News   Python

Technology   Java

Work & Career   CPP

Business   Golang

Finance   C#

Lifestyle   SQL

Knowledge   Kotlin

Web Development   ## Contribute

Web Tutorials   Write an Article

Django Tutorial   Improve an Article

HTML   Pick Topics to Write

JavaScript   Write Interview Experience

Bootstrap   Internships

ReactJS   Video Internship

NodeJS