

Lesson 03 Demo 06

Declaring and Initializing HashMap

Objective: To demonstrate the process of creating, initializing, and utilizing a HashMap in JavaScript to effectively store and retrieve data

Tools required: Visual Studio Code and Node.js

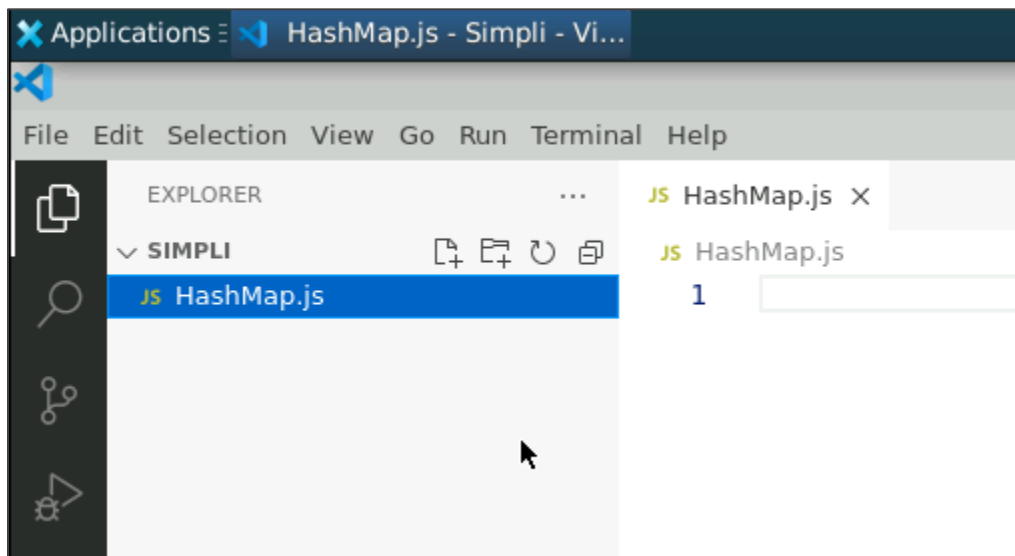
Prerequisites: Basic understanding of data structures and JavaScript

Steps to be followed:

1. Create and execute the JS file

Step 1: Create and execute the JS file

- 1.1 Open the Visual Studio Code editor and create a JavaScript file named **HashMap.js**



1.2 Write the code given below in the **HashMap.js** file:

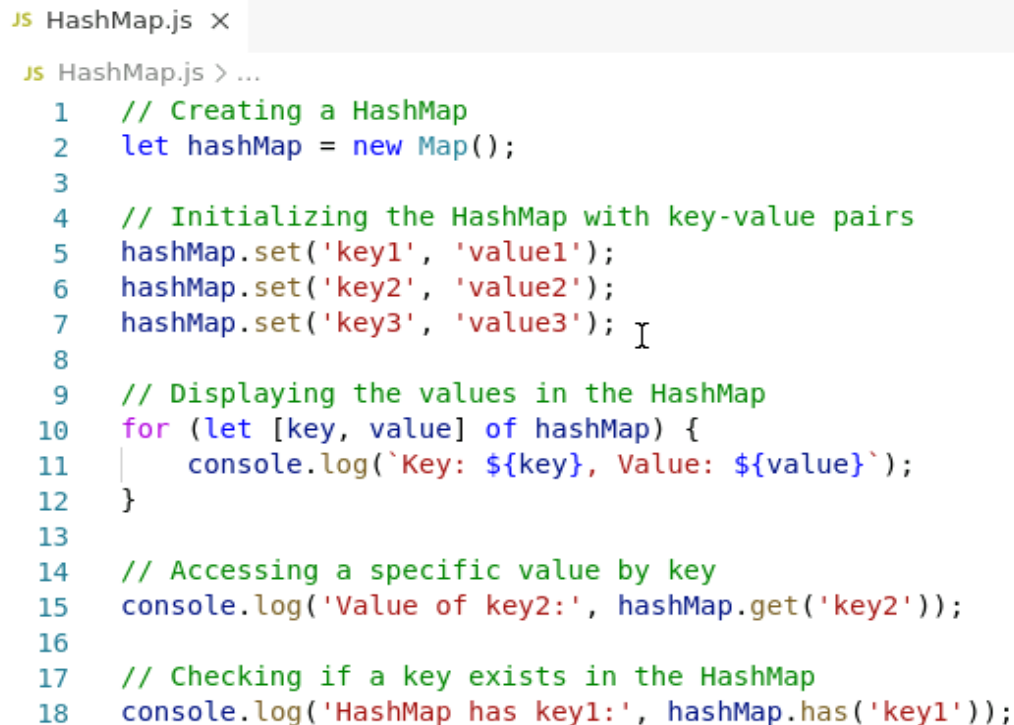
```
// Creating a HashMap
let hashMap = new Map();

// Initializing the HashMap with key-value pairs
hashMap.set('key1', 'value1');
hashMap.set('key2', 'value2');
hashMap.set('key3', 'value3');

// Displaying the values in the HashMap
for (let [key, value] of hashMap) {
  console.log(`Key: ${key}, Value: ${value}`);
}

// Accessing a specific value by key
console.log('Value of key2:', hashMap.get('key2'));

// Checking if a key exists in the HashMap
console.log('HashMap has key1:', hashMap.has('key1'));
```



```
JS HashMap.js X
JS HashMap.js > ...
1  // Creating a HashMap
2  let hashMap = new Map();
3
4  // Initializing the HashMap with key-value pairs
5  hashMap.set('key1', 'value1');
6  hashMap.set('key2', 'value2');
7  hashMap.set('key3', 'value3');
8
9  // Displaying the values in the HashMap
10 for (let [key, value] of hashMap) {
11   console.log(`Key: ${key}, Value: ${value}`);
12 }
13
14 // Accessing a specific value by key
15 console.log('Value of key2:', hashMap.get('key2'));
16
17 // Checking if a key exists in the HashMap
18 console.log('HashMap has key1:', hashMap.has('key1'));
```

1.3 Save the file and execute it in the terminal using the command given below:

node HashMap.js

```
9 // Displaying the values in the HashMap
10 for (let [key, value] of hashMap) {
11     console.log(`Key: ${key}, Value: ${value}`);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
priyanshurajsim@ip-172-31-39-132:~/Downloads/Simpli$ ls
HashMap.js
priyanshurajsim@ip-172-31-39-132:~/Downloads/Simpli$ node HashMap.js
Key: key1, Value: value1
Key: key2, Value: value2
Key: key3, Value: value3
Value of key2: value2
HashMap has key1: true
priyanshurajsim@ip-172-31-39-132:~/Downloads/Simpli$ █
```

This example shows how to declare a HashMap and initialize it with key-value pairs.

By following these steps, you have successfully mastered the creation and manipulation of a HashMap in JavaScript, enhancing your ability to handle key-value pair data structures efficiently.