

array.js

```
1 //Part 1: Refactoring Old Code
2 //Part 3: Feeling Loopy
3 const csvString = "Index,Mass (kg),Spring 1 (m),Spring 2 (m)\n1,0.00,0.050,0.050\n2,0.49,0.066,0.066\n3,0.98,0.087,0.080\n4,1.47,0.116,0.108\n5,1.96,0.142,0.138\n6,2.45,0.166,0.158\n7,2.94,0.193,0.174\n8,3.43,0.204,0.192\n9,3.92,0.226,0.205\n10,4.41,0.238,0.232";
4
5 function parseCSV(csvString) {
6     const rows = csvString.split('\n'); // Split the CSV string into rows using the newline character "\n"
7
8     for (const row of rows) {
9         const cells = row.split(','); // Split the row into cells using the comma ","
10        const rowData = [];
11
12        for (const cell of cells) {
13            rowData.push(cell); // Store each cell in the rowData array
14        }
15
16        console.log(rowData); // Log the entire row data array
17    }
18 }
19
20 console.log("\nExample String:");
21 parseCSV(csvString);
22
23
24 //Part 2: Expanding Functionality
25 const testString2 = 'ID,Name,Occupation,Age\n42,Bruce,Knight,41\n57,Bob,Fry Cook,19\n63,Blaine,Quiz Master,58\n98,Bill,Doctor's Assistant,26';
26
27 // Split the CSV string into rows using the newline character "\n"
28 const dataArray2 = testString2.split('\n');
29
30 // Loop through each row and replace it with an array of cells
31 for (let i = 0; i < dataArray2.length; i++) {
32     dataArray2[i] = dataArray2[i].split(',');
33 }
34
35 console.log(dataArray2);
36
37
38 //Part 3: Transforming Data
39 const csvString1 = "ID,Name,Occupation,Age\n42,Bruce,Knight,41\n57,Bob,Fry Cook,19\n63,Blaine,Quiz Master,58\n98,Bill,Doctor's Assistant,26";
40
41 const rows = csvString1.split('\n');
42 const headings = rows.shift().split(',');
43
44 const objectsArray = [];
45 for (const row of rows) {
46     const values = row.split(',');
47     const object = {};
48     for (let i = 0; i < headings.length; i++) {
49         object[headings[i].toLowerCase()] = values[i];
```

```
50     }
51     objectsArray.push(object);
52 }
53
54 console.log(objectsArray);
55
56
57 // Part 4: Sorting and Manipulating Data
58
59 const data = [
60     { id: "42", name: "Bruce", occupation: "Knight", age: "41" },
61     { id: "48", name: "Barry", occupation: "Runner", age: "25" },
62     { id: "57", name: "Bob", occupation: "Fry Cook", age: "19" },
63     { id: "63", name: "Blaine", occupation: "Quiz Master", age: "58" },
64     { id: "7", name: "Bilbo", occupation: "None", age: "111" }
65 ];
66
67 // Remove the last element
68 data.pop();
69
70 // Insert object at index 1
71 data.splice(1, 0, { id: "48", name: "Barry", occupation: "Runner", age: "25" });
72
73 // Add an object to the end
74 data.push({ id: "7", name: "Bilbo", occupation: "None", age: "111" });
75
76 // Calculate the average age
77 let totalAge = 0;
78 for (const obj of data) {
79     totalAge += parseInt(obj.age);
80 }
81
82 const averageAge = totalAge / data.length;
83
84 console.log("Updated Data:");
85 console.log(data);
86 console.log("Average Age:", averageAge);
87
88
89 //Part 5: Full Circle
90 let csvData = "";
91 for (const obj of data) {
92     const row = Object.values(obj).join(',');
93     csvData += row + '\n';
94 }
95
96 console.log("CSV Format:");
97 console.log(csvData);
98
99
```