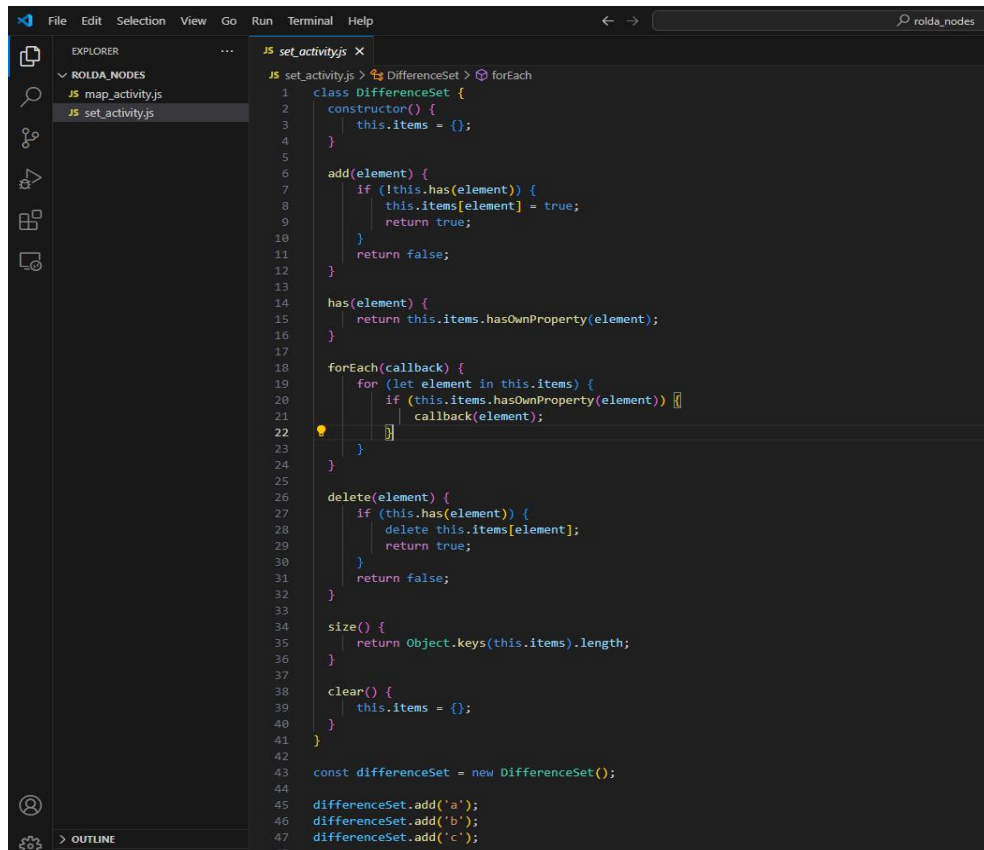


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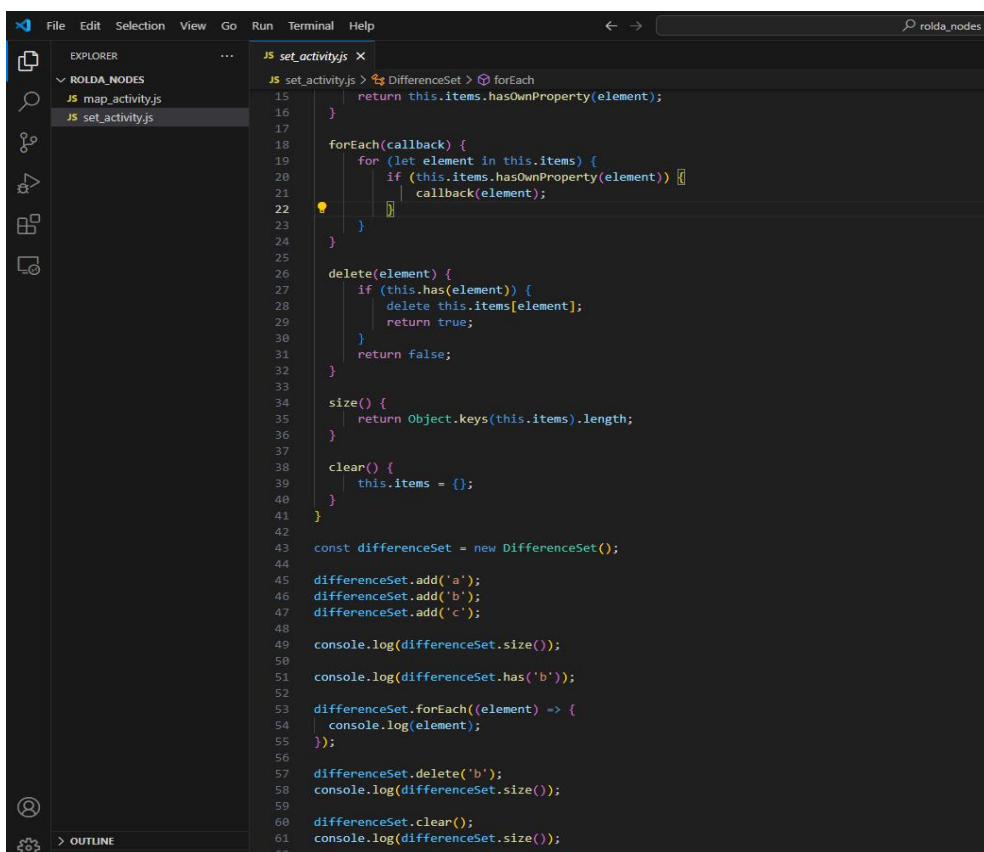
Activity: SET

- Source Code



This screenshot shows the initial implementation of a `DifferenceSet` class in a VS Code editor. The Explorer panel on the left shows a project named `ROLDA_NODES` with files `map_activity.js` and `set_activity.js`. The `set_activity.js` file is open, displaying the following code:

```
1 class DifferenceSet {
2   constructor() {
3     this.items = {};
4   }
5
6   add(element) {
7     if (!this.has(element)) {
8       this.items[element] = true;
9       return true;
10    }
11    return false;
12  }
13
14  has(element) {
15    return this.items.hasOwnProperty(element);
16  }
17
18  forEach(callback) {
19    for (let element in this.items) {
20      if (this.items.hasOwnProperty(element)) {
21        callback(element);
22      }
23    }
24  }
25
26  delete(element) {
27    if (this.has(element)) {
28      delete this.items[element];
29      return true;
30    }
31    return false;
32  }
33
34  size() {
35    return Object.keys(this.items).length;
36  }
37
38  clear() {
39    this.items = {};
40  }
41 }
42
43 const differenceSet = new DifferenceSet();
44
45 differenceSet.add('a');
46 differenceSet.add('b');
47 differenceSet.add('c');
```



This screenshot shows the final implementation of the `DifferenceSet` class, including test cases. The code is as follows:

```
15   return this.items.hasOwnProperty(element);
16 }
17
18 forEach(callback) {
19   for (let element in this.items) {
20     if (this.items.hasOwnProperty(element)) {
21       callback(element);
22     }
23   }
24 }
25
26 delete(element) {
27   if (this.has(element)) {
28     delete this.items[element];
29     return true;
30   }
31   return false;
32 }
33
34 size() {
35   return Object.keys(this.items).length;
36 }
37
38 clear() {
39   this.items = {};
40 }
41 }
42
43 const differenceSet = new DifferenceSet();
44
45 differenceSet.add('a');
46 differenceSet.add('b');
47 differenceSet.add('c');
48
49 console.log(differenceSet.size());
50
51 console.log(differenceSet.has('b'));
52
53 differenceSet.forEach((element) => {
54   console.log(element);
55 });
56
57 differenceSet.delete('b');
58 console.log(differenceSet.size());
59
60 differenceSet.clear();
61 console.log(differenceSet.size());
62
```

- Output

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
C:\Program Files\nodejs\node.exe .\set_activity.js
3
true
a
b
c
2
0
set_activity.js:49
set_activity.js:51
set_activity.js:54
set_activity.js:54
set_activity.js:54
set_activity.js:58
set_activity.js:61
```