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WT ASSIGNMENT-2

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HelloWorld.js   3wycudnjs   NEW   JAVASCRIPT   RUN

```javascript
//set operations
let set1= new Set([1,2,3,'hi',{'tabla':'instrument'}])
let set2= new Set()
console.log(set1.entries())
console.log (set1.has(2))
if(set1.has(2)){
    set1.delete(2)
}
console.log(set1.entries())
if(set1.has(1)){
    set1.delete(1)
}
else{
    set1.clear()
}
console.log(set1.entries())

//adding values
set2.add(1)
console.log(set2.entries())
set2.add(2)
set2.add(3)
let array=[...set2]
console.log(array)

//array to set
let array1 [1,2,3,4]
```

STDIN
Input for the program (Optional)

```
[Set Entries] {
  [ 1, 1 ],
  [ 2, 2 ],
  [ 3, 3 ],
  [ 'hi', 'hi' ],
  [ { tabla: 'instrument' }, { tabla:
}
true
[Set Entries] {
  [ 1, 1 ],
  [ 3, 3 ],
  [ 'hi', 'hi' ],
  [ { tabla: 'instrument' }, { tabla:
}
[Set Entries] {
  [ 3, 3 ],
  [ 'hi', 'hi' ],
```

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```javascript
15    }
16    console.log(set1.entries())
17
18    //adding values
19    set2.add(1)
20    console.log(set2.entries())
21    set2.add(2)
22    set2.add(3)
23    let array=[...set2]
24    console.log(array)
25
26    //array to set
27    let array1=[1,2,3,4]
28    let setto_array=[...new Set(array1)]
29    console.log(setto_array)
30
31    //remove duplicate values
32    let arr1=[1,2,3,4,4,4,5,5,5,6,6,6,2,1]
33    console.log(arr1)
34
35    let arrset1=Array.from(new Set(arr1))
36    console.log(arrset1)
37
38    let arrset2=new Set(arr1)
39    console.log(arrset2)
40
```

STDIN

Input for the program (Optional)

```
    [ { tabla: 'instrument' }, { tabla:
    }
[Set Entries] {
    [ 3, 3 ],
    [ 'hi', 'hi' ],
    [ { tabla: 'instrument' }, { tabla:
    }
[Set Entries] { [ 1, 1 ] }
    [ 1, 2, 3 ]
    [ 1, 2, 3, 4 ]
    [
        1, 2, 3, 4, 4, 4,
        5, 5, 5, 6, 6, 6,
        2, 1
    ]
    [ 1, 2, 3, 4, 5, 6 ]
    Set { 1, 2, 3, 4, 5, 6 }
```

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```javascript
1    //Performance
2    let s=new Set()
3    let a=[]
4    let b=[1,2,3,4,5]
5    for(let i=0;i<b.length;i++)
6    {
7      console.time('Array')
8      a.push(b[i])
9      console.timeEnd('Array')
10     console.time('Set')
11     s.add(b[i])
12     console.timeEnd('Set')
13   }
14
```

STDIN

Input for the program (Optional)

Output:

```
Array: 0.101ms
Set: 0.009ms
Array: 0.006ms
Set: 0.005ms
Array: 0.007ms
Set: 0.010ms
Array: 0.004ms
Set: 0.004ms
Array: 0.004ms
Set: 0.005ms
```

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STDIN

Input for the program (Optional)

```javascript
1  //Map Operations
2  let capitals= new Map()
3  capitals.set('bangalore','KA')
4  capitals.set('Mumbai','MH')
5  capitals.set('Chennai','TN')
6  console.log(capitals)
7
8  a=capitals.entries()
9  console.log(a)
10 console.log(capitals.keys())
11 console.log(capitals.values())
12 console.log(capitals.has('bangalore'))
13 console.log(capitals.has('Chennai'))
14 console.log(capitals.size)
15
16 for(let[key,value] of capitals)
17 {
18    console.log(key+'is capital of'+value)
19 }
20
21 capitals.forEach((keys,values)=>{
22    console.log(keys,values)
23 });
24
25 capitals.clear()
26 console.log(capitals)
```

```
Map { 'bangalore' => 'KA', 'Mumbai' =>
[Map Entries] {
    [ 'bangalore', 'KA' ],
    [ 'Mumbai', 'MH' ],
    [ 'Chennai', 'TN' ]
}
[Map Iterator] { 'bangalore', 'Mumbai'
[Map Iterator] { 'KA', 'MH', 'TN' }
true
true
3
bangaloreis capital ofKA
Mumbaiis capital ofMH
Chennaiis capital ofTN
KA bangalore
MH Mumbai
TN Chennai
Map {}
```

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STDIN

Input for the program (Optional)

```javascript
1  //Performance of map
2  let capitals=new Map()
3  capitals.set('bangalore','KA')
4  capitals.set('Chennai','TN')
5  console.time('Map')
6  capitals.forEach((value,key)=>{
7     console.log(key,value)
8  });
9  console.timeEnd('Map')
10
11 let a=['butter','ghee','paneer']
12 console.time('Array')
13 a.forEach((item)=>{
14    console.log(item)
15 });
16 console.timeEnd('Array')
```

Output:

```
bangalore KA
Chennai TN
Map: 5.168ms
butter
ghee
paneer
Array: 0.165ms
```

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```javascript
1  //union of sets
2  let set1=new Set([1,2,3,4])
3  let set2=new Set([5,6,'a','b'])
4  let finalset=new Set([...set1,...set2])
5  console.log(finalset)
6
7  //map concatenation
8  let map1= new Map([['a',1],['b',2],['c',3]])
9  let map2= new Map([['x',4],['y',5],['z',6]])
10 let map=new Map([...map1].concat([...map2]))
11 console.log(map)
```

STDIN
Input for the program (Optional)

Output:
```
Set { 1, 2, 3, 4, 5, 6, 'a', 'b' }
Map { 'a' => 1, 'b' => 2, 'c' => 3, 'x' :
```

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```javascript
1  //map to Object
2
3  let obj1={
4    id:'1',name:'nandan',phone:987
5  }
6  let arr=Object.entries(obj1)
7  let map=new Map(arr)
8  console.log(map)
9
10 let map1=new Map([['a',1],['b',2]])
11 let m=map1.entries()
12 let newobj=Object.fromEntries(m)
13 console.log(map1)
14 console.log(newobj)
15
16 console.time('Object')
17 for(let key in obj1){
18   if(`${key}`=='id')
19     console.log(`${obj1[key]}`)
20 }
21 console.timeEnd('Object')
22
23 console.time('Map')
24 map1.forEach((value,key)=>{
25   if(key=='id')
26     console.log(value)
```

STDIN
Input for the program (Optional)

Output:
```
Map { 'id' => '1', 'name' => 'nandan', '|
Map { 'a' => 1, 'b' => 2 }
{ a: 1, b: 2 }
1
Object: 0.181ms
Map: 0.040ms
```

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```javascript
1  let e=new Set([1,2,3]);
2  let f=new Set([4,5,3]);
3
4  let intersection=new Set([...e].filter(x=>f.has(x)))
5  console.log(intersection)
6  let diff=new Set([...e].filter(x=>!f.has(x)))
7  console.log(diff)
```

STDIN

Input for the program (Optional)

Output:

```
Set { 3 }
Set { 1, 2 }
```

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