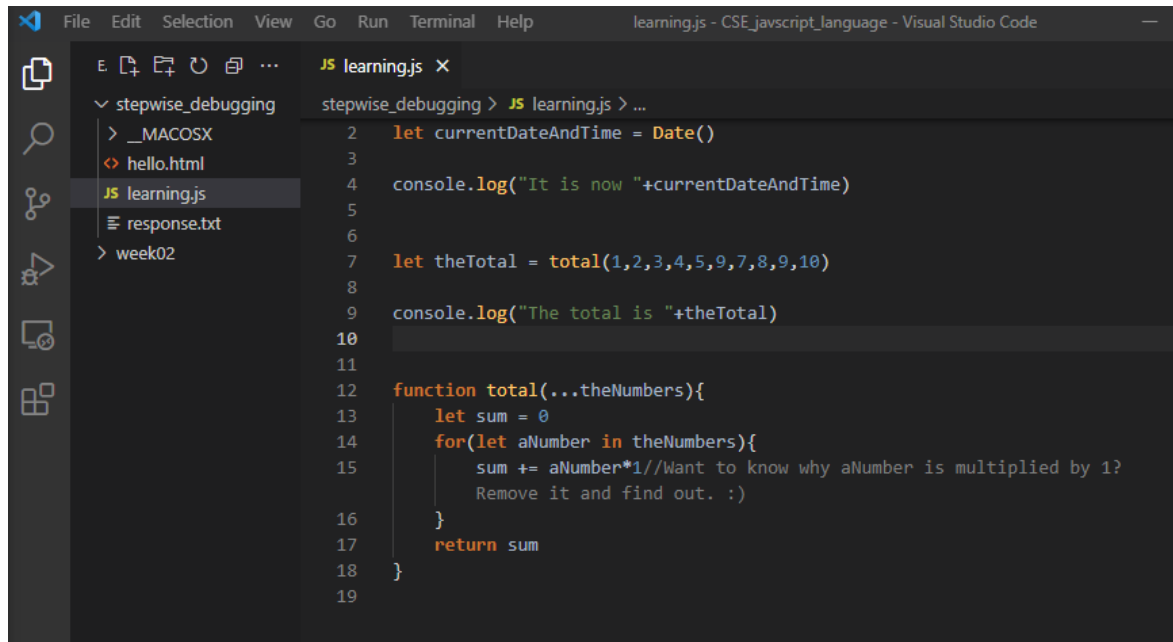


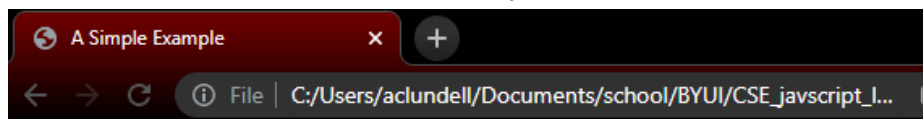
Task 1 asks you to download the zip file which contains hello.html and learning.js. Once you have it open you'll see this



```
1  stepwise_debugging > JS learning.js > ...
2  let currentDateAndTime = Date()
3
4  console.log("It is now "+currentDateAndTime)
5
6
7  let theTotal = total(1,2,3,4,5,9,7,8,9,10)
8
9  console.log("The total is "+theTotal)
10
11
12  function total(...theNumbers){
13      let sum = 0
14      for(let aNumber in theNumbers){
15          sum += aNumber*1//Want to know why aNumber is multiplied by 1?
16              Remove it and find out. :)
17      }
18      return sum
19  }
```

This code looks like it should be adding the numbers 1 through 10 and printing the total to the console.

Here's what it looks like when I have my browser load the html file.

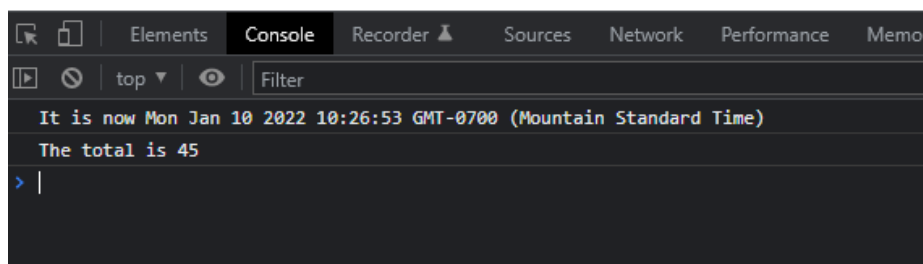


Check the console to see your output

Right-click (control click for MacOS) on this page and select

Inspect

to display the console.



You can see the total is 45. But that's not right!? Shouldn't it be 55? $1+2+3+4+5+6+7+8+9+10 = 55$... So what's going on?

Let's take a closer look at the for loop.

```
for(let aNumber in theNumbers){  
    sum += aNumber*1  
}
```

This for loop is called a 'for...in' statement. In Javascript that means it will iterate over elements in an array using a string as the key. So, if you have an array like this

```
[  
    {'str1': 1},  
    {'str2': 2},  
    {'str3': 3}  
]
```

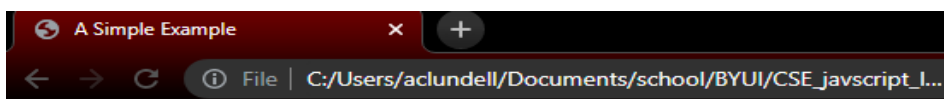
Then it will iterate through str1, then str2 then str3 and the value 1, 2, 3 is what you're going to be able to access in your variable. Here's some additional documentation on how that works.

<https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/for...in>

So the real problem here is that we're using the wrong kind of for loop for the array we've created. In that documentation, it mentions you can use a 'for...of' statement to iterate over an array of numbers. So let's update the code...

```
function total(...theNumbers){  
    let sum = 0  
    for(let aNumber of theNumbers){  
        sum += aNumber*1  
    }  
    return sum  
}
```

And let's reload the browser

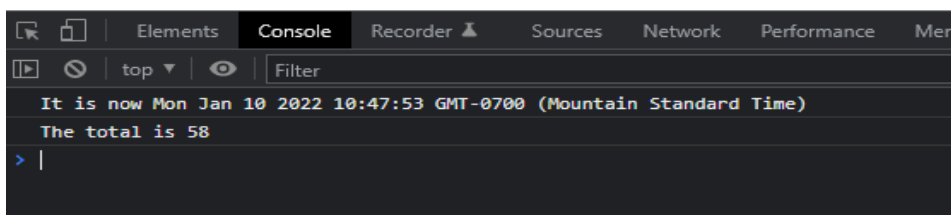


Check the console to see your output

Right-click (control click for MacOS) on this page and select

Inspect

to display the console.



That looks better!

I hope you all learned a little trick about javascript here and if you need further explanation, let me know!