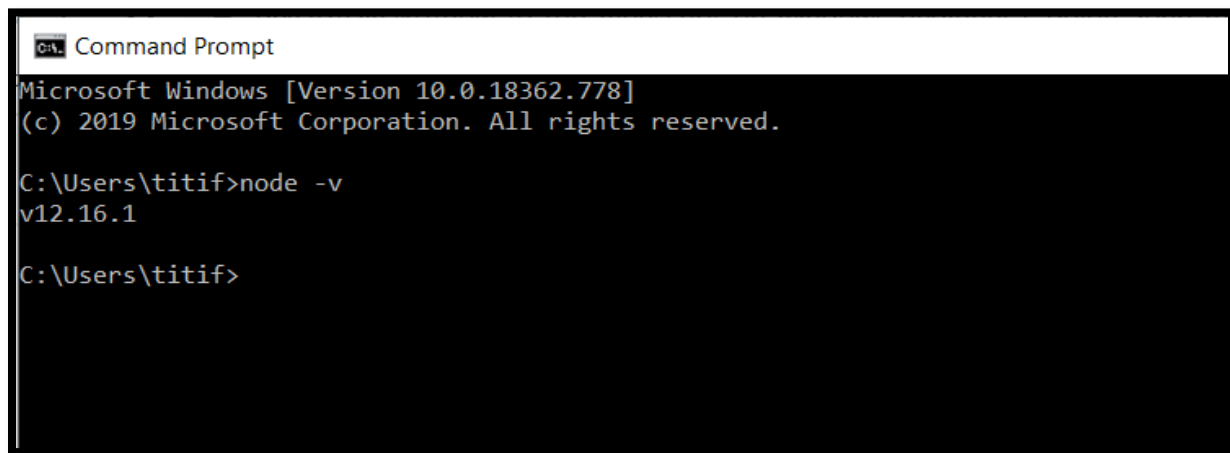


How to Install Typescript:

Steps to install Typescript on a Windows machine using npm

- **Step 1:** Install Node.js. Typescript is typically installed via npm which comes with Node.js. We can download and install Node.js from its official website: Node.js npm the node.js package manager will be installed automatically along with Node.js.

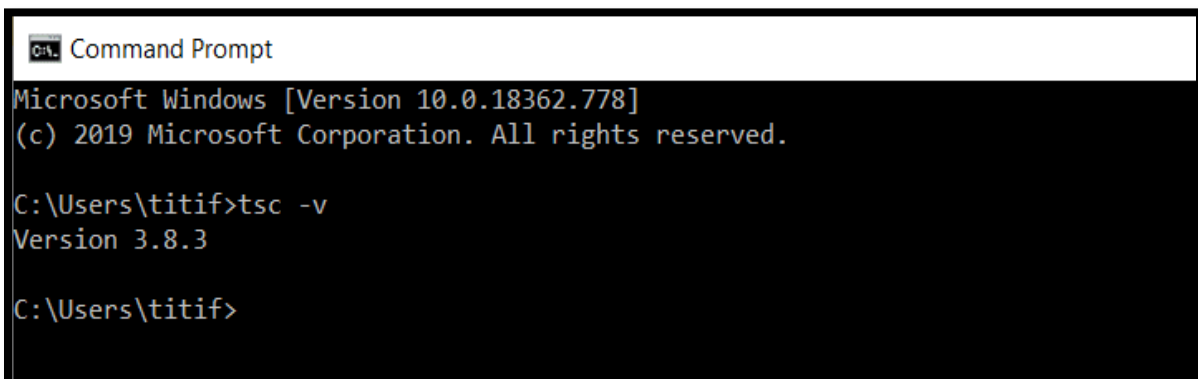


```
Command Prompt
Microsoft Windows [Version 10.0.18362.778]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\titif>node -v
v12.16.1

C:\Users\titif>
```

- **Step 2:** Install Typescript Run the following command in the cmd.
npm install -g typescript. This will install Typescript globally. In the same manner, if you want to check for Typescript being installed, type tsc -v in the cmd and you should get back something like Version 3.8.3.

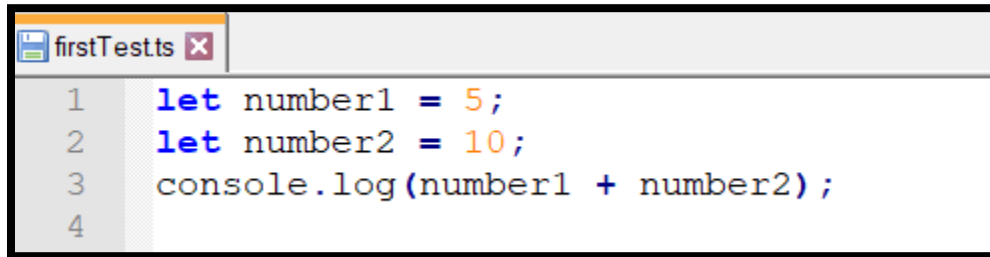


```
Command Prompt
Microsoft Windows [Version 10.0.18362.778]
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C:\Users\titif>tsc -v
Version 3.8.3

C:\Users\titif>
```

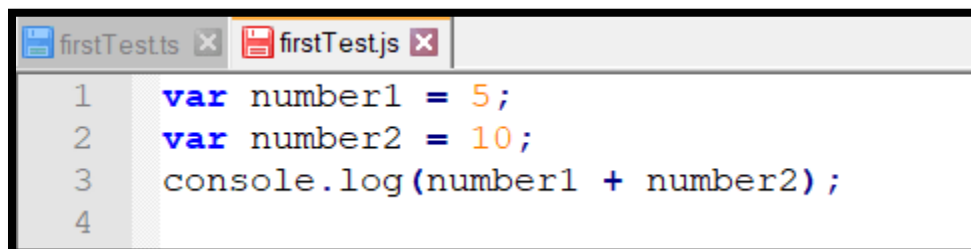
- **Step 3:** Create a file with a .ts extension create a file with a .ts extension like firstTest.ts. and Open it in your editor and write any Javascript you want inside it. For an Example:



A screenshot of a code editor window with a single tab titled 'firstTest.ts'. The editor contains four lines of TypeScript code: line 1 has 'let number1 = 5;', line 2 has 'let number2 = 10;', line 3 has 'console.log(number1 + number2);', and line 4 is empty. The code is syntax-highlighted with 'let' in blue, numbers in orange, and strings in blue.

```
1 let number1 = 5;
2 let number2 = 10;
3 console.log(number1 + number2);
4
```

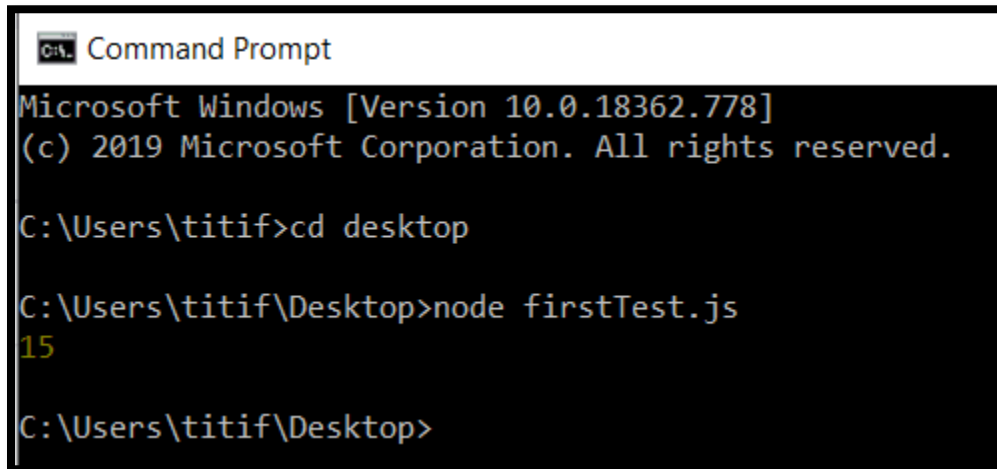
- **Step 4:** Create a .js file out of your .ts one. Typescript can't be used like Javascript. It first needs to be compiled (translated) to regular Js. In the cmd, navigate inside the folder that contains your .ts file and run the following command tsc filename.ts. This will create, in the same folder, a new file with the same name but a .js extension. This is the step in which the "translation" takes place. What the newly created js file contains is basically all the Typescript we wrote, only compiled to Javascript. In my case, the Javascript code it's almost identical, because I didn't really use any of the Typescript features.



A screenshot of a code editor window with two tabs: 'firstTest.ts' and 'firstTest.js'. The 'firstTest.js' tab is active and shows the compiled JavaScript code. It contains four lines: line 1 has 'var number1 = 5;', line 2 has 'var number2 = 10;', line 3 has 'console.log(number1 + number2);', and line 4 is empty. The code is syntax-highlighted with 'var' in blue, numbers in orange, and strings in blue.

```
1 var number1 = 5;
2 var number2 = 10;
3 console.log(number1 + number2);
4
```

- **Step 5:** Run your JavaScript code using Node the result of your code, we can run it using Node. So, inside the cmd write node filename.ts. In my case it will be node firstTest.js



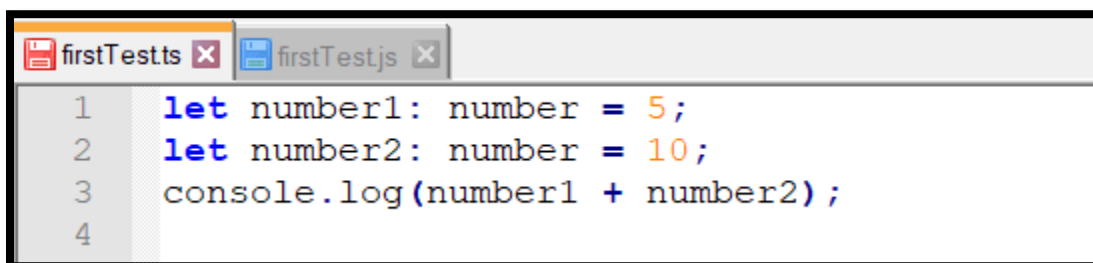
```
Command Prompt
Microsoft Windows [Version 10.0.18362.778]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\titif>cd desktop

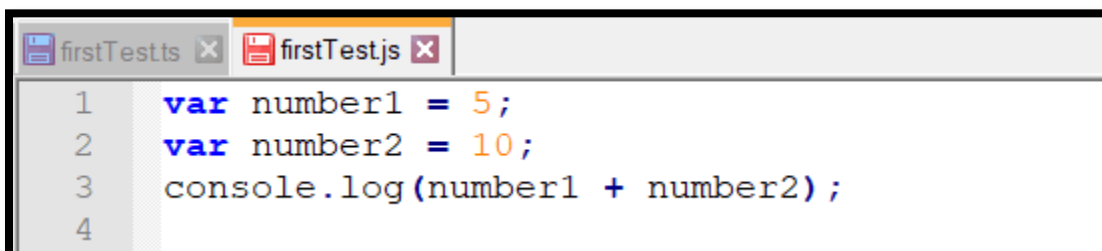
C:\Users\titif\Desktop>node firstTest.js
15

C:\Users\titif\Desktop>
```

- Let's we use some very simple Typescript code. We are going to explicitly set our two variables to be of type number. Ignore the syntax, the example is strictly to show you how the JavaScript code looks like in the end.



```
firstTest.ts x firstTest.js x
1 let number1: number = 5;
2 let number2: number = 10;
3 console.log(number1 + number2);
4
```



```
firstTest.ts x firstTest.js x
1 var number1 = 5;
2 var number2 = 10;
3 console.log(number1 + number2);
4
```

- The .js file the types don't show up and the let has been converted to a var. One thing to keep in mind is that every time you make a change in your .ts file, you must run Typescript so the changes also appear in the .js file. For less typing, you can combine the two commands like so `tsc filename .ts && node filename.js`.

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