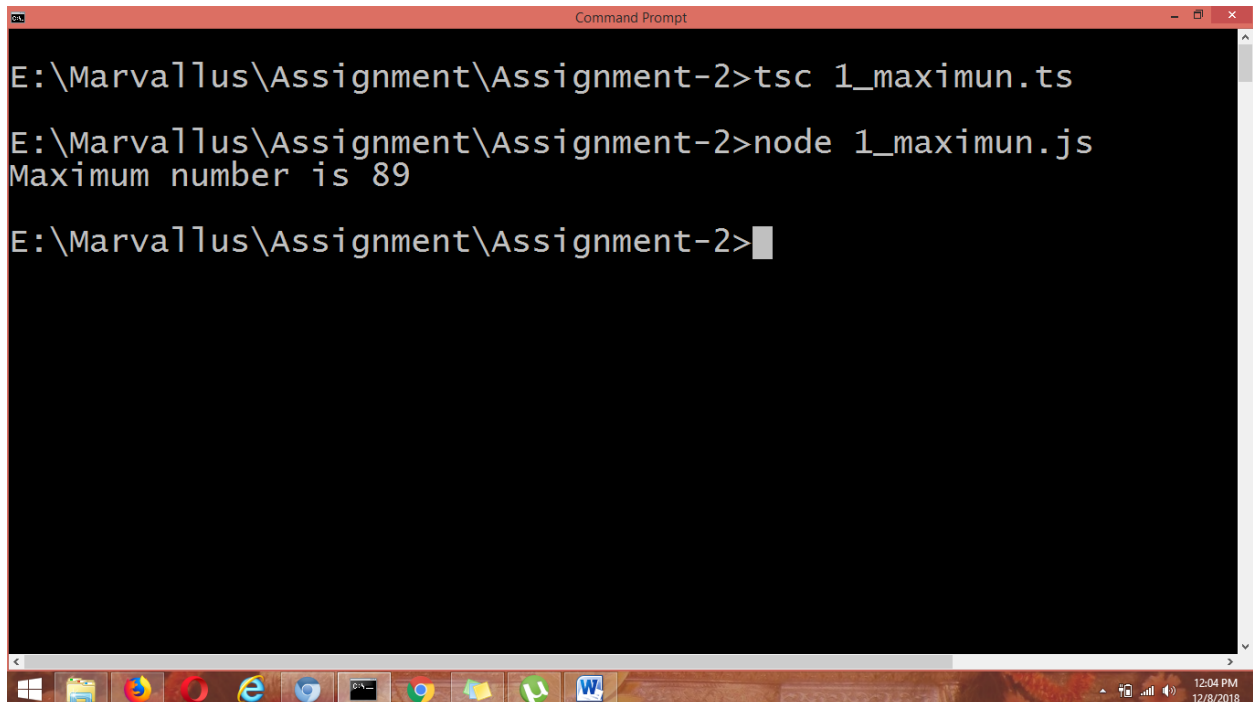


1.

```
function maximum(arr:any):number {  
    var i  
    var max:number = 0  
  
    for(i = 0;i<arr.length;i++) {  
        if(max < arr[i])  
            max = arr[i]  
    }  
    return max;  
}  
var arr:number[] = new Array(23, 89, 6, 29, 56, 45, 77, 32 )  
  
console.log("Maximum number is "+maximum(arr))
```

O/P :

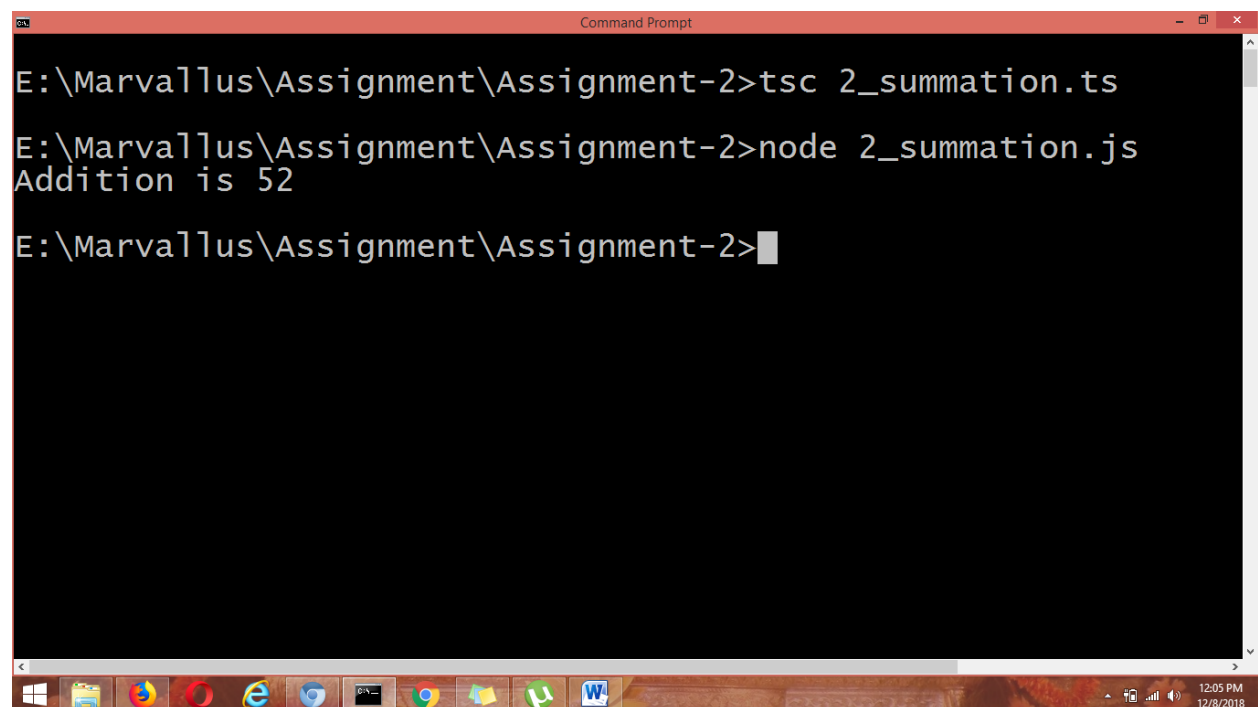


```
Command Prompt  
E:\Marvallus\Assignment\Assignment-2>tsc 1_maximun.ts  
E:\Marvallus\Assignment\Assignment-2>node 1_maximun.js  
Maximum number is 89  
E:\Marvallus\Assignment\Assignment-2>
```

2.

```
function summation(...arr:number[]):number {  
    var i  
    var sum:number = 0  
  
    for(i = 0;i<arr.length;i++) {  
        sum = sum + arr[i]  
    }  
    return sum;  
}  
var sum:number = summation(23, 6, 7, 4, 5, 7)  
console.log("Addition is "+sum)
```

o/p:



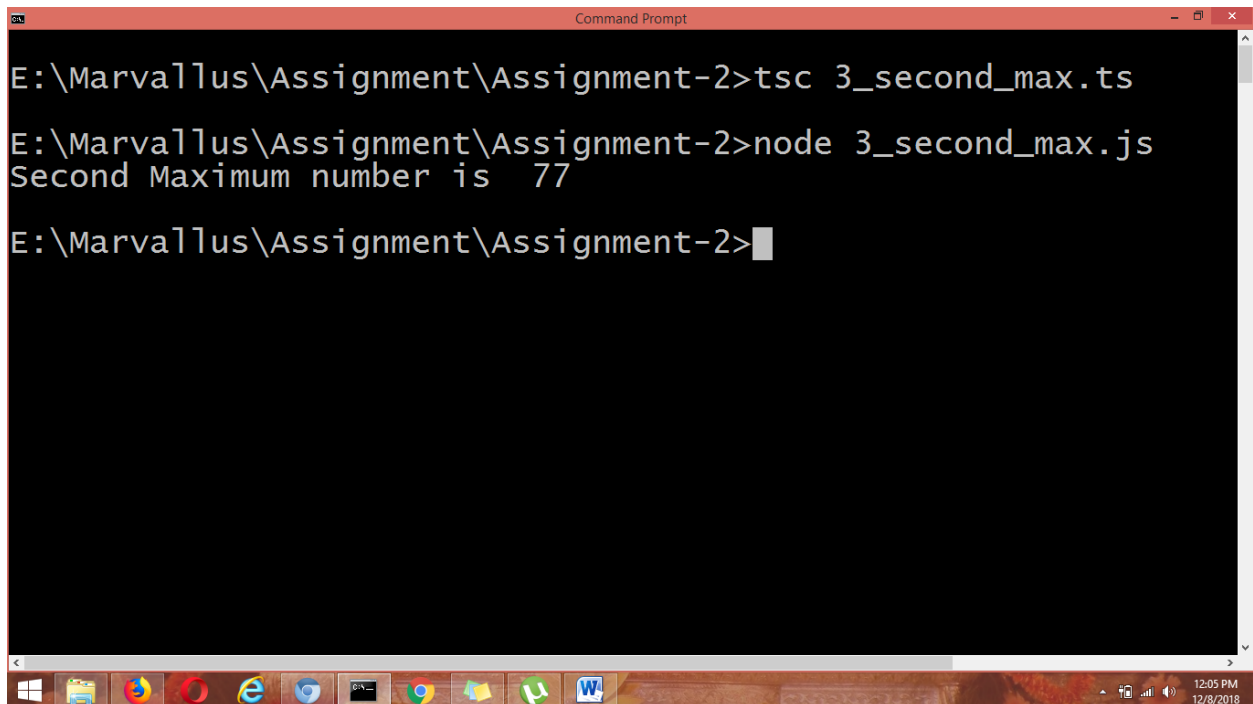
The screenshot shows a Windows Command Prompt window with a red title bar labeled "Command Prompt". The window is open to the directory "E:\Marvallis\Assignment\Assignment-2". The user has entered the command "tsc 2_summation.ts" to compile the TypeScript file. The next command entered is "node 2_summation.js", which has been executed, resulting in the output "Addition is 52". The prompt is now waiting for the next command. The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 12:05 PM on 12/8/2018.

```
E:\Marvallis\Assignment\Assignment-2>tsc 2_summation.ts  
E:\Marvallis\Assignment\Assignment-2>node 2_summation.js  
Addition is 52  
E:\Marvallis\Assignment\Assignment-2>
```

3.

```
function maximum_second(arr:any):number {  
    var i  
    var max:number = 0  
    var s_max:number = 0  
  
    for(i = 0;i<arr.length;i++) {  
        if(max < arr[i])  
            max = arr[i]  
  
        if(s_max < arr[i] && max > arr[i])  
            s_max = arr[i]  
    }  
    return s_max  
}  
var arr:number[] = new Array(23, 89, 6, 29, 56, 45, 77, 32 )  
  
console.log("Second Maximum number is "+maximum_second(arr))
```

o/p:



```
Command Prompt  
E:\Marvallus\Assignment\Assignment-2>tsc 3_second_max.ts  
E:\Marvallus\Assignment\Assignment-2>node 3_second_max.js  
Second Maximum number is 77  
E:\Marvallus\Assignment\Assignment-2>
```

The screenshot shows a Windows Command Prompt window with a red title bar. The window title is "Command Prompt". The command prompt shows the following sequence of commands and output:

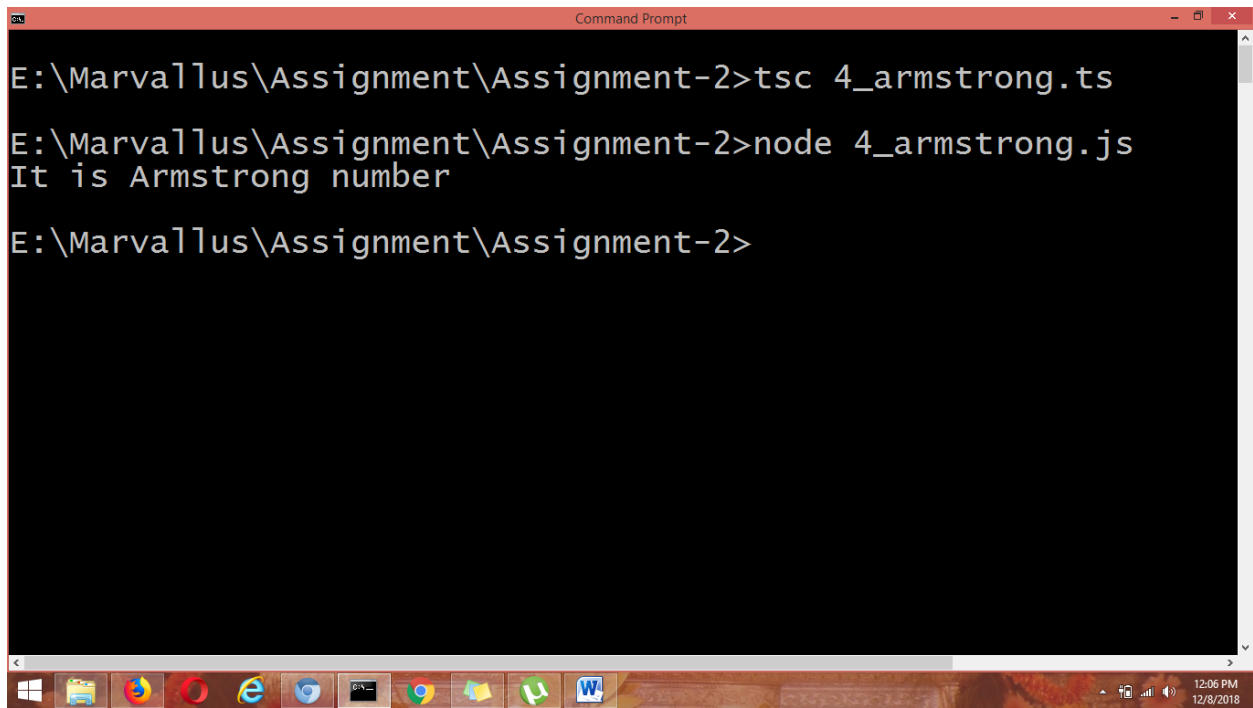
- Command: `E:\Marvallus\Assignment\Assignment-2>tsc 3_second_max.ts`
- Command: `E:\Marvallus\Assignment\Assignment-2>node 3_second_max.js`
- Output: `Second Maximum number is 77`
- Command: `E:\Marvallus\Assignment\Assignment-2>` (with a cursor)

The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock indicating 12:05 PM on 12/8/2018.

4.

```
let chk_armstrong = (num:number) => {  
  var temp:number = num  
  var arm:number = 0  
  var n:number  
  while(temp > 0){  
    n = temp % 10  
    temp = (temp - n) / 10  
    arm = arm + n * n * n  
  }  
  
  if(arm == num) {  
    console.log("It is Armstrong number")  
  } else {  
    console.log("It is not Armstrong number")  
  }  
}  
  
chk_armstrong(153)
```

o/p:



```
Command Prompt  
E:\Marvallus\Assignment\Assignment-2>tsc 4_armstrong.ts  
E:\Marvallus\Assignment\Assignment-2>node 4_armstrong.js  
It is Armstrong number  
E:\Marvallus\Assignment\Assignment-2>
```

The screenshot shows a Windows Command Prompt window with a red title bar. The window title is "Command Prompt". The command prompt shows the following sequence of commands and output:

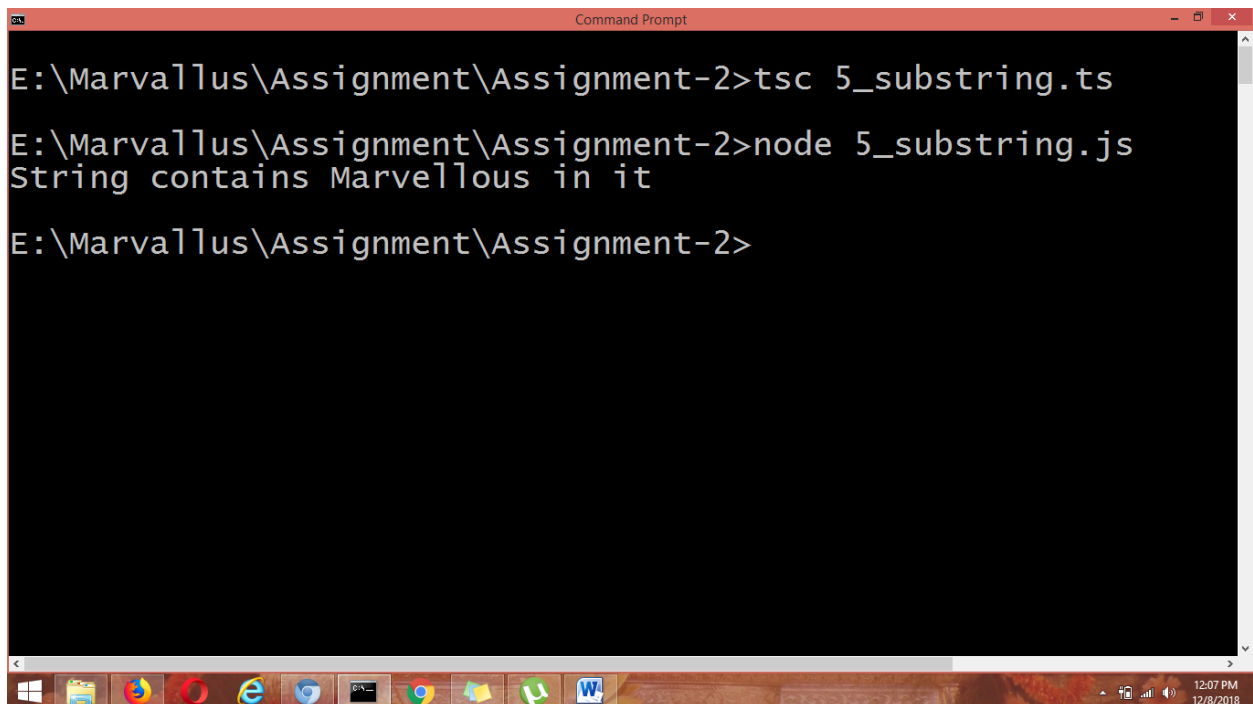
- Command: `tsc 4_armstrong.ts`
- Command: `node 4_armstrong.js`
- Output: `It is Armstrong number`
- Command: `E:\Marvallus\Assignment\Assignment-2>`

The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock indicating 12:06 PM on 12/8/2018.

5.

```
function chkstring(str:string):void {  
    var str1:string = "Marvellous";  
    if(str.indexOf(str1) != -1){  
        console.log("String contains "+str1+" in it")  
    }else{  
        console.log("String not contains "+str1+" in it")  
    }  
}  
var str:string = "Pune Kothrud Marvellous Infosystems"  
chkstring(str)
```

o/p:



The screenshot shows a Windows Command Prompt window titled "Command Prompt". The user is in the directory "E:\Marvallus\Assignment\Assignment-2". They have run the command "tsc 5_substring.ts" to compile the TypeScript file. Then, they have run "node 5_substring.js", which has produced the output "String contains Marvellous in it". The prompt is now waiting for the next command. The Windows taskbar is visible at the bottom, showing various application icons and the system clock indicating 12:07 PM on 12/8/2018.

```
Command Prompt  
E:\Marvallus\Assignment\Assignment-2>tsc 5_substring.ts  
E:\Marvallus\Assignment\Assignment-2>node 5_substring.js  
String contains Marvellous in it  
E:\Marvallus\Assignment\Assignment-2>
```