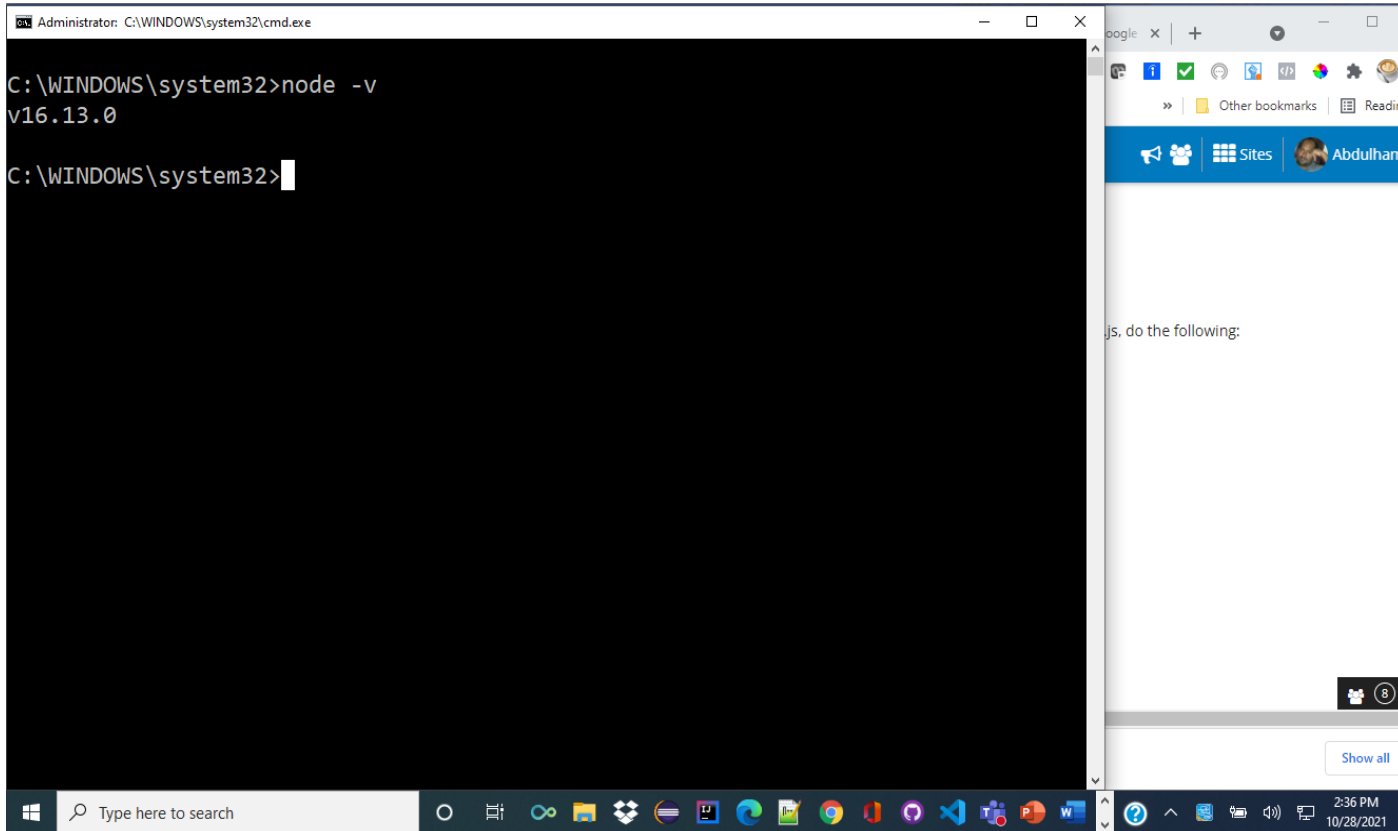


# Lab3a – TypeScript – Part 1

## 1. Task1

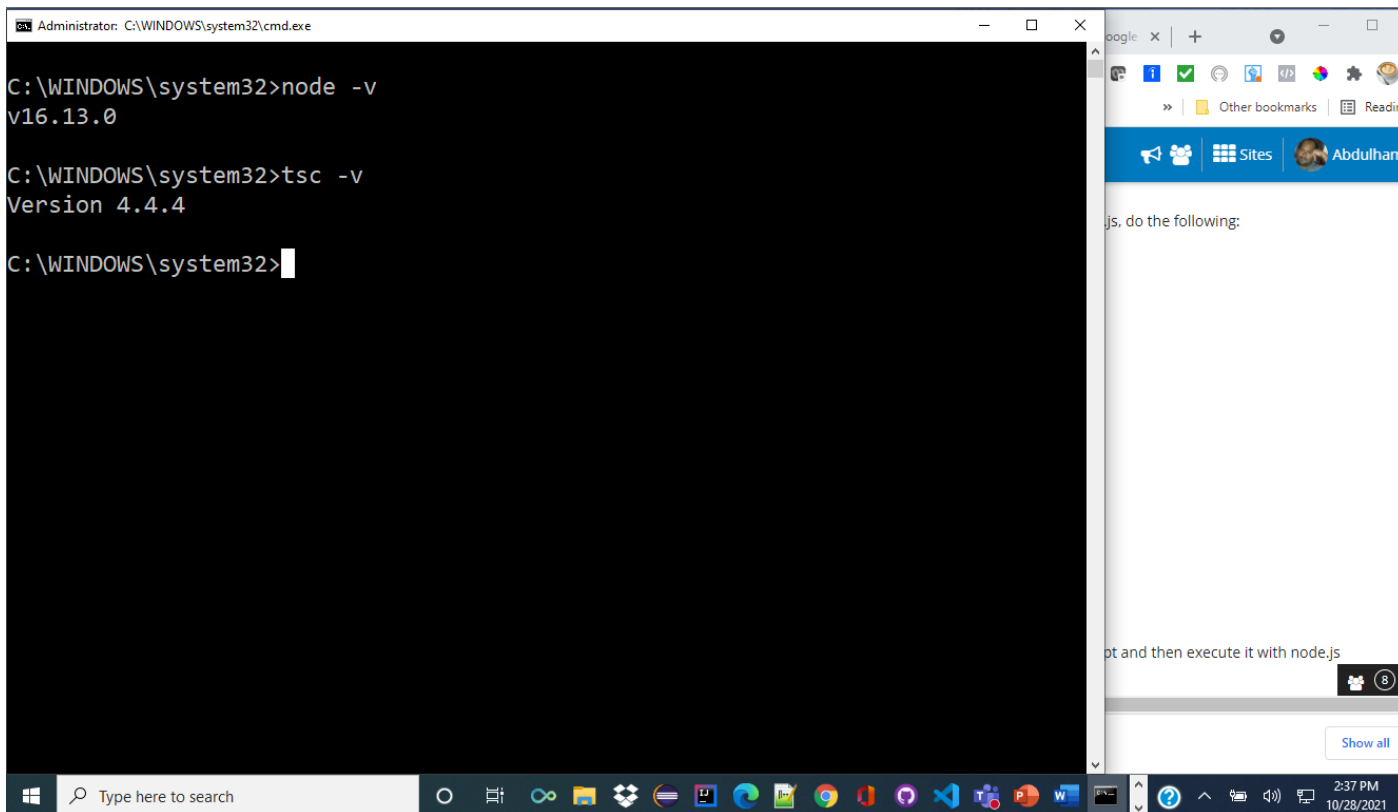


The screenshot shows a Windows desktop with a command prompt window and a web browser. The command prompt window is titled "Administrator: C:\WINDOWS\system32\cmd.exe" and shows the following commands and output:

```
C:\WINDOWS\system32>node -v
v16.13.0
C:\WINDOWS\system32>
```

The web browser window shows a page with a search bar and a "Show all" button. The page content is partially visible, showing "js, do the following:" and "Abdulhan".

## 2. Task2



The screenshot shows a Windows desktop with a command prompt window and a web browser. The command prompt window is titled "Administrator: C:\WINDOWS\system32\cmd.exe" and shows the following commands and output:

```
C:\WINDOWS\system32>node -v
v16.13.0
C:\WINDOWS\system32>tsc -v
Version 4.4.4
C:\WINDOWS\system32>
```

The web browser window shows a page with a search bar and a "Show all" button. The page content is partially visible, showing "js, do the following:" and "Abdulhan".

### 3. Task-3

```
Administrator: C:\WINDOWS\system32\cmd.exe - node
Volume in drive C is Windows
Volume Serial Number is 0EDF-FD28

Directory of C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a

10/28/2021  02:47 PM    <DIR>          .
10/28/2021  02:47 PM    <DIR>          ..
               0 File(s)                0 bytes
               2 Dir(s)  819,442,855,936 bytes free

C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a>code .

C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a>tsc -v
Version 4.4.4

C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a>node
Welcome to Node.js v16.13.0.
Type ".help" for more information.
> const a = [17,9,4,82,15,36]
undefined
> console.log(a);
[ 17, 9, 4, 82, 15, 36 ]
undefined
> 
```

File Edit Selection View Go Run Terminal Help

app.ts - Lab3a - Visual Studio Code [Administrator]

EXPLORER

OPEN EDITORS

LAB3A

JS app.js

TS app.ts

TS app.ts

calculateAverage2

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

count++;

});

return (total / count).toFixed(2);

}

console.log(`The Average of \${[17, 9, 4, 82, 15, 36]} is \${calculateAverage(array)}`);

const array2 = [9, 4, 1, 7, 2, 3, 5, 8, 10, 6];

function calculateAverage2(arr2) {

let total2 = 0;

let count2 = 0;

array2.forEach(function(item, index) {

total2 += item;

count2++;

});

return (total2 / count2).toFixed(2);

}

console.log(`The Average of \${[9, 4, 1, 7, 2, 3, 5, 8, 10, 6]} is \${calculateAverage2(arrav2)}`);

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a> node app

The Average of 17,9,4,82,15,36 is 27.17

The Average of 9,4,1,7,2,3,5,8,10,6 is 5.5

PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a> tsc app.ts

PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a> node app

The Average of 17,9,4,82,15,36 is 27.17

The Average of 9,4,1,7,2,3,5,8,10,6 is 5.50

PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a>

main\*

Type here to search

Ln 34, Col 20

## 4. Task 4

The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left displays the project structure for 'LAB3a', including files like 'enum\_type', 'app.js', 'app.ts', 'payroll.js', and 'payroll.ts'. The main editor window is open to 'payroll.ts', showing the following TypeScript code:

```
1  /*  
2   * PayrollCode  
3   */  
4   */  
5  
6  enum Payroll {  
7      FICA,  
8      STATE,  
9      MEDICARE,  
10 };  
11  
12 let tax: Payroll = Payroll.FICA;  
13 console.log(tax);  
14  
15 enum PayrollCode {  
16     FICA = 10,  
17     STATE = 5,  
18     MEDICARE = 12,  
19 }  
20  
21 let tax2: PayrollCode = PayrollCode.FICA;  
22 console.log(tax2);
```

Below the code editor, the TERMINAL panel is active, showing the command prompt output:

```
PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a> tsc payroll.ts  
PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a> node payroll  
0  
10  
PS C:\Users\meles\OneDrive\Documents\MIU\CS445-MAP\git-repos2\CS445-MAP\Lab3a>
```

The terminal output indicates that the TypeScript file was successfully compiled and executed, resulting in the output '0' and '10'.