

## 1. Task1 and 2

The screenshot shows the Visual Studio Code interface with a project named 'app.ts - CS445modernAsync'. The Explorer sidebar on the left shows a file tree with folders 'cs445-MAP', 'extra', 'forkangular', and 'lab3'. Inside 'lab3', there are files 'app.ts', 'repo3', 'webapp', 'index.html', 'lab 2 solutions.pdf', 'lab3a.pdf', and 'README.md'. The 'app.ts' file is open in the editor, showing a simple TypeScript file structure with comments and a file extension change from '.ts' to '.tsx'. The Terminal panel at the bottom shows the following commands and output:

```
C:\Users\VP\Desktop\VB\CS445 Modern Asynchronous programming\lab3\modern\CS445modernAsync\lab3>node -v
v14.17.1

C:\Users\VP\Desktop\VB\CS445 Modern Asynchronous programming\lab3\modern\CS445modernAsync\lab3>npm install -g typescript
C:\Users\VP\AppData\Local\Temp\1\open\tsc -> C:\Users\VP\AppData\Local\Temp\1\node_modules\typescript\bin\tsc
C:\Users\VP\AppData\Local\Temp\1\open\tsc -> C:\Users\VP\AppData\Local\Temp\1\node_modules\typescript\bin\tsc
+ typescript@4.4.4
updated 1 package in 6.158s

C:\Users\VP\Desktop\VB\CS445 Modern Asynchronous programming\lab3\modern\CS445modernAsync\lab3>ts -v
Version 4.4.4

C:\Users\VP\Desktop\VB\CS445 Modern Asynchronous programming\lab3\modern\CS445modernAsync\lab3>
```

The status bar at the bottom indicates the current file is 'app.ts' at line 24, column 53, with 4 spaces and 8 tabs. The system tray shows the date and time as 7:38 PM on 10/28/2021.

## 3.

The image shows a Visual Studio Code editor window with a file named `lab3a.ts` open. The code in the file is as follows:

```
1  /*
2   * app.ts
3   */
4
5  let calcAverage = (a:number[]) =>{
6      let sum:number = 0;
7      for (let i:number = 0; i < a.length; i++){
8          sum+= a[i];
9      }
10     return `The Average of [i(a)] is ${((sum/a.length).toFixed(2))}`;
11 }
12
13 let a:number[] = [17, 9, 4, 82, 15, 36];
14 let b:number[] = [9, 4, 1, 7, 2, 3, 5, 8, 10, 6];
15
16 let result = calcAverage(a);
17 let result2 = calcAverage(b);
18 console.log(result);
19 console.log(result2);
20
21 //enum Numeric Type
22 //Given below is a set of declarations and
23 //Initialization of constants for Tax rates used in a Payroll application.
24 const FICA = 14, STATE = 5, MEDICARE = 12;
25 enum TaxRates {FICA = 14, STATE = 5, MEDICARE = 12};
26
27
```

The terminal output shows the following commands and results:

```
C:\Users\VP\Desktop\VB\CS445 Modern Asynchronous programming\lab3\modern\CS445modernAsync>cd lab3a
C:\Users\VP\Desktop\VB\CS445 Modern Asynchronous programming\lab3\modern\CS445modernAsync\lab3a>ts-node app.ts
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
```

The status bar at the bottom indicates the file is at line 24, column 53, with 4 spaces and UTF-8 encoding. The system tray shows the date and time as 7:32 PM on 10/28/2021.