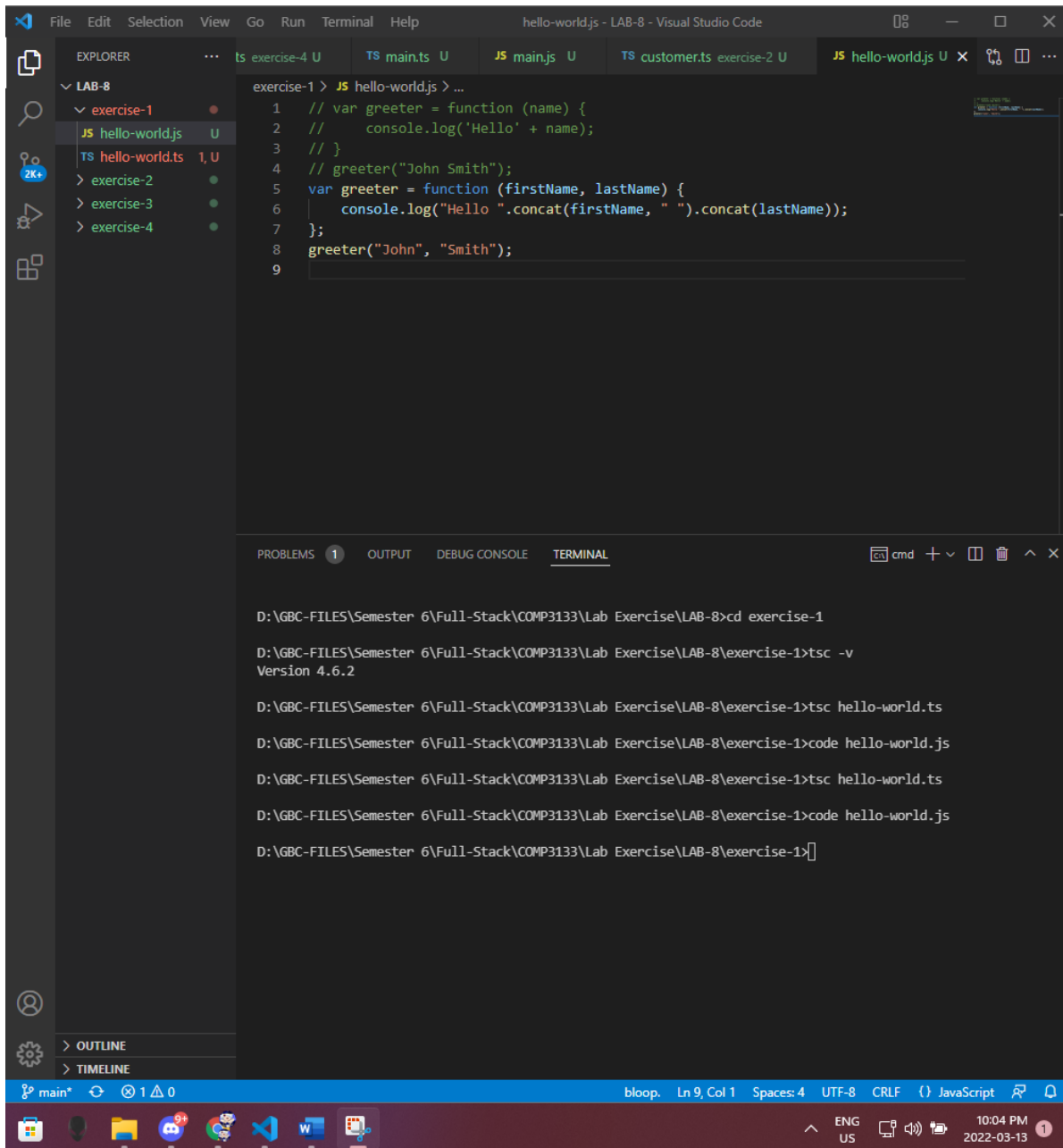


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Exercise-1



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left displays a project structure for 'LAB-8' with subfolders 'exercise-1', 'exercise-2', 'exercise-3', and 'exercise-4'. The 'exercise-1' folder is expanded, showing 'JS hello-world.js' and 'TS hello-world.ts'. The main editor window is open to 'JS hello-world.js', displaying the following code:

```
1 // var greeter = function (name) {
2 //   console.log('Hello' + name);
3 // }
4 // greeter("John Smith");
5 var greeter = function (firstName, lastName) {
6   console.log("Hello ".concat(firstName, " ").concat(lastName));
7 };
8 greeter("John", "Smith");
9
```

Below the editor, the TERMINAL panel is active, showing a series of commands and their outputs in a Windows command prompt:

```
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8>cd exercise-1

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc -v
Version 4.6.2

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>
```

The status bar at the bottom indicates the current file is 'main*', the editor is at 'Ln 9, Col 1', and the file encoding is 'UTF-8'.

EXERCISE-2

The screenshot shows the Visual Studio Code interface with a project named 'LAB-8'. The Explorer sidebar on the left lists files: 'exercise-1', 'exercise-2', 'JS customer.js', 'TS customer.ts', 'exercise-3', and 'exercise-4'. The 'JS customer.js' file is selected. The main editor displays the content of 'customer.js', which defines a 'Customer' class and creates an instance named 'customer'.

```
1 var Customer = /** @class */ (function () {
2     function Customer() {
3     }
4     Customer.prototype.greeter = function () {
5         console.log("Hello ".concat(this.firstName, " ").concat(this.lastName));
6     };
7     return Customer;
8 }());
9 var customer = new Customer();
10 customer.firstName = "John";
11 customer.lastName = "Smith";
12 customer.greeter();
13
```

Below the editor is the TERMINAL panel, which shows the following commands and output:

```
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8>cd exercise-1
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc -v
Version 4.6.2
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>cd ../exercise-2
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>tsc customer.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>node customer.js
Hello John Smith
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>
```

The status bar at the bottom indicates the current file is 'main*', the editor is at line 1, column 1, with 4 spaces, UTF-8 encoding, CRLF line endings, and the language is JavaScript.

EXERCISE-3

The screenshot displays the Visual Studio Code interface. The Explorer sidebar on the left shows a project structure for 'LAB-8' with files 'exercise-1', 'exercise-2', 'exercise-3', 'exercise-4', 'customer.js', 'customer.ts', 'main.js', and 'main.ts'. The main editor window is open to 'customer.ts', showing a TypeScript class 'Customer' with private attributes 'firstName' and 'lastName', a constructor, and a 'greeter' method. Below the editor is a terminal window with the following content:

```
exercise-3 > TS customer.ts > Customer > constructor
1 class Customer {
2     private firstName: string;
3     private lastName: string;
4
5
6     constructor(firstName: string, lastName: string){
7         this.firstName = firstName;
8         this.lastName = lastName;
9     }
10
11     public greeter(){
12         console.log(`Hello ${this.firstName} ${this.lastName}`);
13     }
14 }
15
16
17 let customer = new Customer("John", "Smith");
18 customer.greeter();
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc -v
Version 4.6.2

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>cd ../exercise-2

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>tsc customer.ts

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>node customer.js
Hello John Smith

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>cd ../exercise-3

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-3>tsc customer.ts

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-3>node customer.js
Hello John Smith

D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-3>
```

main* 0 0 bloop. Ln 7, Col 18 Spaces: 4 UTF-8 CRLF {} TypeScript

10:07 PM 2022-03-13

EXERCISE-4

The screenshot shows the Visual Studio Code interface with a TypeScript file named `customer.ts` open. The Explorer sidebar on the left shows a project structure with `LAB-8` containing `exercise-1`, `exercise-2`, `exercise-3`, and `exercise-4`. The `customer.ts` file is selected under `exercise-4`. The main editor displays the following TypeScript code:

```
1 export class Customer {
2   private firstName: string;
3   private lastName: string;
4   private age: number;
5
6   constructor(firstName: string, lastName: string, age: number){
7     this.firstName = firstName;
8     this.lastName = lastName;
9     this.age = age;
10  }
11
12  public greeter(){
13    console.log(`Hello ${this.firstName} ${this.lastName}`);
14  }
15  public getAge(){
16    console.log(`Age: ${this.age}`);
17  }
18
19 }
```

Below the code editor, the TERMINAL panel shows a series of commands and their outputs:

```
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>tsc hello-world.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>code hello-world.js
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-1>cd ../exercise-2
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>tsc customer.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>node customer.js
Hello John Smith
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-2>cd ../exercise-3
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-3>tsc customer.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-3>node customer.js
Hello John Smith
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-3>cd ../exercise-4
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-4>tsc main.ts
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-4>node main.js
Hello John Smith
Age: 12
D:\GBC-FILES\Semester 6\Full-Stack\COMP3133\Lab Exercise\LAB-8\exercise-4>
```

The status bar at the bottom indicates the file is `main*`, the editor is at `Ln 11, Col 1`, and the encoding is `UTF-8`. The system tray shows the time as 10:09 PM on 2022-03-13.