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Roll No: 05
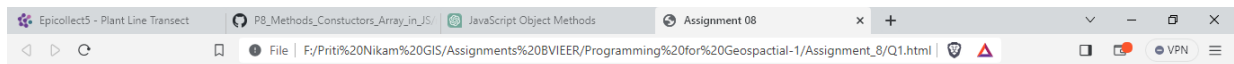
Practical 8: <u>Methods, Constructor, and Array in JS</u>

<u>Note: Create an HTML file for all the below questions.</u>

<u>Q1</u>. What are methods in JavaScript. Create a method for greeting a user "Hello"?

➔

Q1

What are methods in JavaScript? Create a method for greeting a user "Hello"?

Answer 1: In JavaScript, methods are functions that are associated with objects.
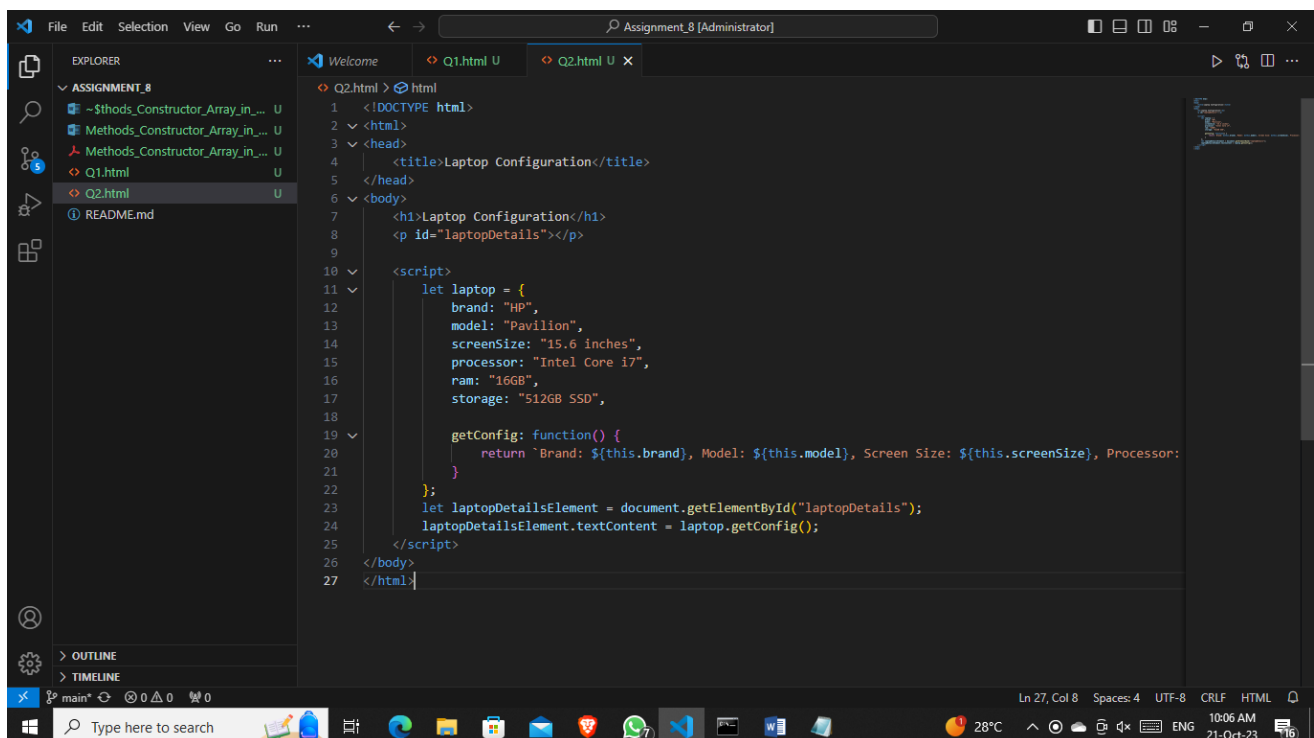
Answer 2: They are a fundamental part of object-oriented programming in JavaScript.

Answer 3: Methods allow you to define behavior that can be performed on or with an object.

Hello

Q2. Create a getConfig method in an object to get details about a laptop.

➔


```html
<!DOCTYPE html>
<html>
<head>
    <title>Laptop Configuration</title>
</head>
<body>
    <h1>Laptop Configuration</h1>
    <p id="laptopDetails"></p>

    <script>
        let laptop = {
            brand: "HP",
            model: "Pavilion",
            screenSize: "15.6 inches",
            processor: "Intel Core i7",
            ram: "16GB",
            storage: "512GB SSD",

            getConfig: function() {
                return `Brand: ${this.brand}, Model: ${this.model}, Screen Size: ${this.screenSize}, Processor:
            }
        };
        let laptopDetailsElement = document.getElementById("laptopDetails");
        laptopDetailsElement.textContent = laptop.getConfig();
    </script>
</body>
</html>
```

Laptop Configuration

Brand: HP, Model: Pavilion, Screen Size: 15.6 inches, Processor: Intel Core i7, RAM: 16GB, Storage: 512GB SSD

Q3. Create multiple laptop objects, and declare a method to compare the laptop object with another laptop object to get the fastest laptop having more RAM.
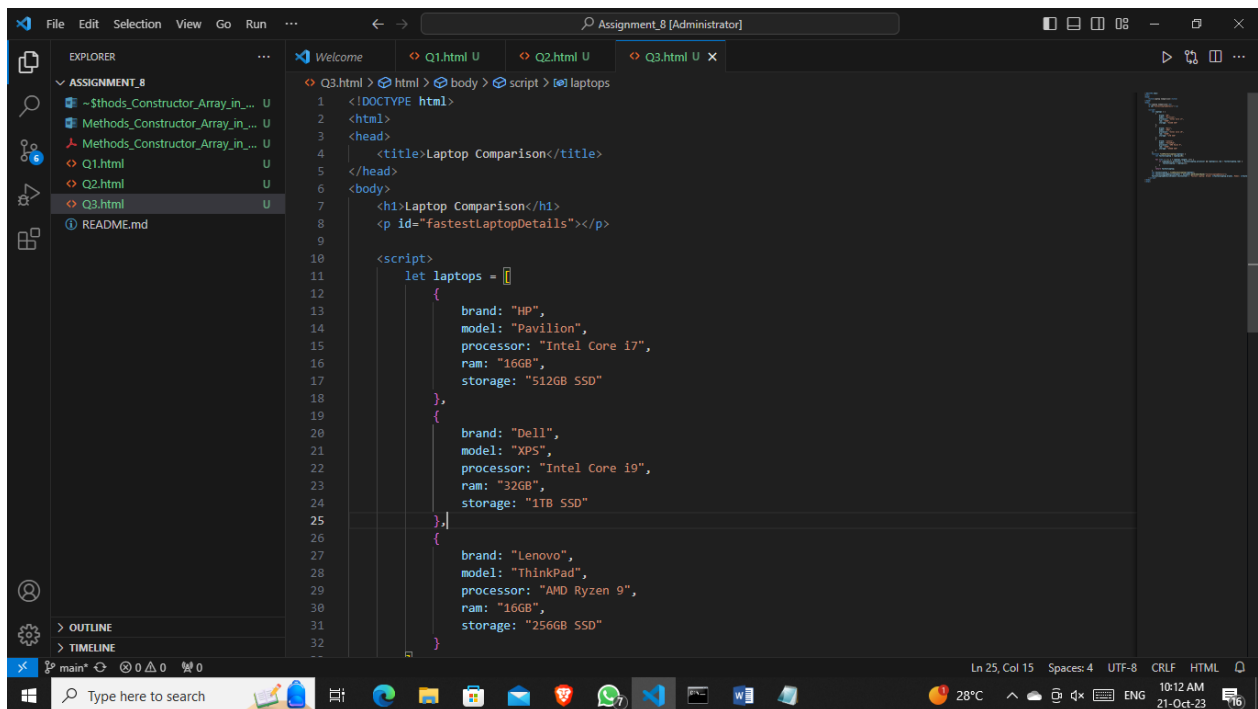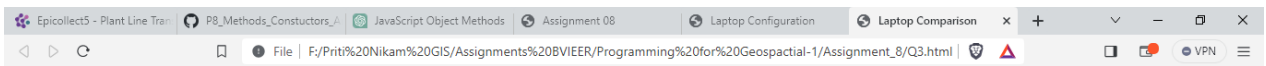
➔


```html
<!DOCTYPE html>
<html>
<head>
    <title>Laptop Comparison</title>
</head>
<body>
    <h1>Laptop Comparison</h1>
    <p id="fastestLaptopDetails"></p>

    <script>
        let laptops = [
            {
                brand: "HP",
                model: "Pavilion",
                processor: "Intel Core i7",
                ram: "16GB",
                storage: "512GB SSD"
            },
            {
                brand: "Dell",
                model: "XPS",
                processor: "Intel Core i9",
                ram: "32GB",
                storage: "1TB SSD"
            },
            {
                brand: "Lenovo",
                model: "ThinkPad",
                processor: "AMD Ryzen 9",
                ram: "16GB",
                storage: "256GB SSD"
            }
```
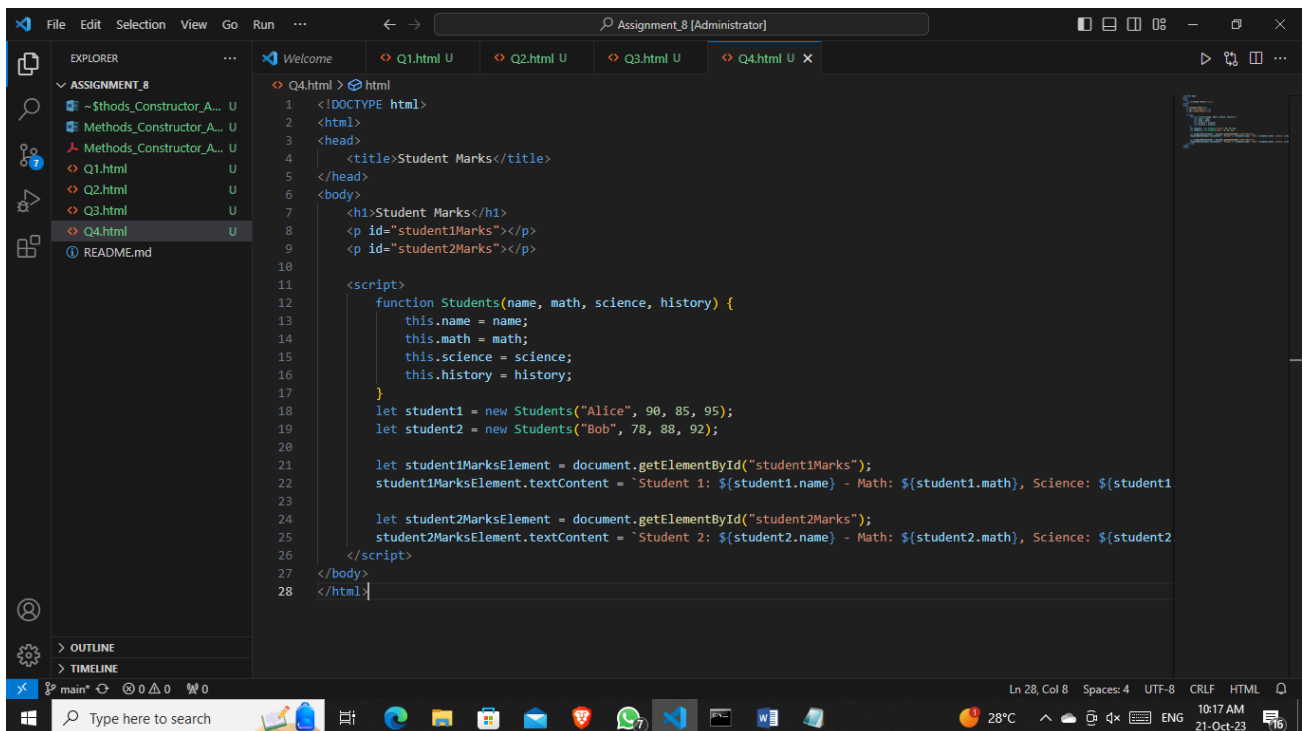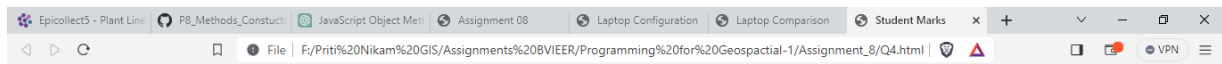
Laptop Comparison

Fastest Laptop: Brand: Dell, Model: XPS, Processor: Intel Core i9, RAM: 32GB, Storage: 1TB SSD

<u>Q4</u>. Create a constructor function called students to create objects having marks for different subjects.

➔


```html
<!DOCTYPE html>
<html>
<head>
    <title>Student Marks</title>
</head>
<body>
    <h1>Student Marks</h1>
    <p id="student1Marks"></p>
    <p id="student2Marks"></p>

    <script>
        function Students(name, math, science, history) {
            this.name = name;
            this.math = math;
            this.science = science;
            this.history = history;
        }
        let student1 = new Students("Alice", 90, 85, 95);
        let student2 = new Students("Bob", 78, 88, 92);

        let student1MarksElement = document.getElementById("student1Marks");
        student1MarksElement.textContent = `Student 1: ${student1.name} - Math: ${student1.math}, Science: ${student1

        let student2MarksElement = document.getElementById("student2Marks");
        student2MarksElement.textContent = `Student 2: ${student2.name} - Math: ${student2.math}, Science: ${student2
    </script>
</body>
</html>
```

Student Marks

Student 1: Alice - Math: 90, Science: 85, History: 95

Student 2: Bob - Math: 78, Science: 88, History: 92
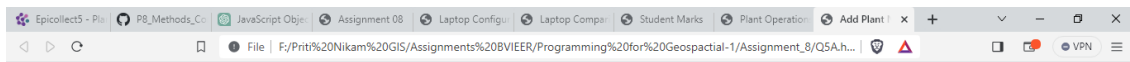
Q5. Create an Array having names of different plants and perform the following operations:

a. Add a new plant name to the array

➔


```html
<!DOCTYPE html>
<html>
<head>
    <title>Add Plant Name</title>
</head>
<body>
    <h1>Add Plant Name</h1>

    <p id="plantList"></p>

    <script>
        // Define an array of plant names
        const plantNames = ["Rose", "Tulip", "Lily", "Sunflower"];

        // Add a new plant name to the array
        const newPlant = "Daisy";
        plantNames.push(newPlant);

        // Display the updated array
        const plantListElement = document.getElementById("plantList");
        plantListElement.textContent = "Plants in the array: " + plantNames.join(", ");
    </script>
</body>
</html>
```
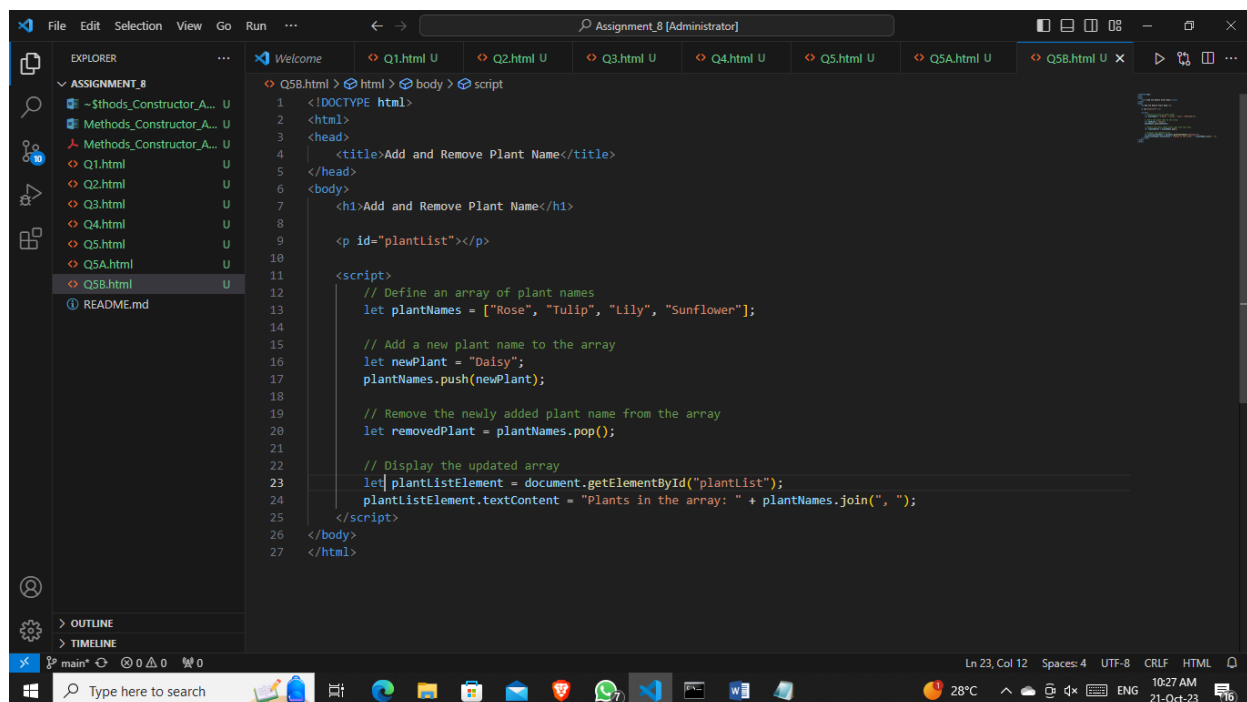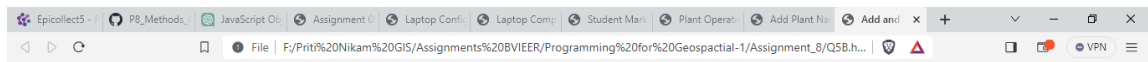
b. Remove the newly added plant name from the array


```html
<!DOCTYPE html>
<html>
<head>
    <title>Add and Remove Plant Name</title>
</head>
<body>
    <h1>Add and Remove Plant Name</h1>

    <p id="plantList"></p>

    <script>
        // Define an array of plant names
        let plantNames = ["Rose", "Tulip", "Lily", "Sunflower"];

        // Add a new plant name to the array
        let newPlant = "Daisy";
        plantNames.push(newPlant);

        // Remove the newly added plant name from the array
        let removedPlant = plantNames.pop();

        // Display the updated array
        let plantListElement = document.getElementById("plantList");
        plantListElement.textContent = "Plants in the array: " + plantNames.join(", ");
    </script>
</body>
</html>
```

Add and Remove Plant Name

Plants in the array: Rose, Tulip, Lily, Sunflower

c. Loop through the array and print the name of the plant one by one

Q5C.html > html

```html
</head>
<body>
    <h1>Add, Remove, and Loop through Plant Names</h1>

    <p id="plantList"></p>
    <p id="loopResults"></p>

    <script>
        // Define an array of plant names
        let plantNames = ["Rose", "Tulip", "Lily", "Sunflower"];

        // Add a new plant name to the array
        let newPlant = "Daisy";
        plantNames.push(newPlant);

        // Remove the newly added plant name from the array
        let removedPlant = plantNames.pop();

        // Display the updated array
        let plantListElement = document.getElementById("plantList");
        plantListElement.textContent = "Plants in the array: " + plantNames.join(", ");

        // Loop through the array and print the name of each plant
        let loopResultsElement = document.getElementById("loopResults");
        loopResultsElement.textContent = "Plant Names:";
        plantNames.forEach(function(plant) {
            loopResultsElement.textContent += "\n" + plant;
        });
    </script>
</body>
</html>
```
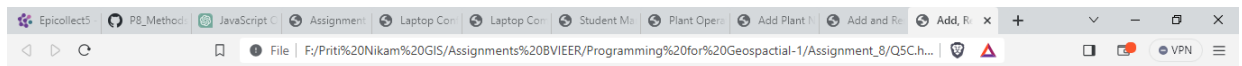
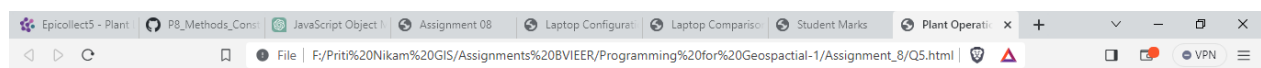# Add, Remove, and Loop through Plant Names

Plants in the array: Rose, Tulip, Lily, Sunflower

Plant Names: Rose Tulip Lily Sunflower

➔ The whole code together…..


```html
<!DOCTYPE html>
<html>
<head>
    <title>Plant Operations</title>
</head>
<body>
    <h1>Plant Operations</h1>

    <p id="plantList"></p>
    <p id="result"></p>

    <script>
        // Define an array of plant names
        let plantNames = ["Rose", "Tulip", "Lily", "Sunflower"];

        // Add a new plant name to the array
        let newPlant = "Daisy";
        plantNames.push(newPlant);

        // Remove the newly added plant name from the array
        let removedPlant = plantNames.pop();

        // Display the updated array
        let plantListElement = document.getElementById("plantList");
        plantListElement.textContent = "Plants in the array: " + plantNames.join(", ");

        // Loop through the array and print the name of each plant
        let resultElement = document.getElementById("result");
        resultElement.textContent = "Plant Names:";
        plantNames.forEach(function(plant) {
            resultElement.textContent += "\n" + plant;
        });
    </script>
```


Plant Operations

Plants in the array: Rose, Tulip, Lily, Sunflower

Plant Names: Rose Tulip Lily Sunflower