```html
<html>
    <head>
        <title>Hi</title>
    </head>

    <body>
        <h1>JavaScript</h1>
        <h1>Another Heading</h1>

        <button onclick="turnRed()">Click Me</button>

        <script>
            function turnRed(){
                const headings =  document.querySelectorAll('h1');
                for(const heading of headings){
                    heading.style.color = 'red'
                }
            }
        </script>
    </body>
</html>


<script>
    const array1 = ['a', 'b', 'c']

    for (const element of array1) {
        console.log(element);
    }

</script>
```

```html
<html>
    <head>
        <title>Counter </title>
    </head>

    <body>
        <h1>0</h1>
        <button >increment</button>

        <script>

            // load from localstorage
            let counter = localStorage.getItem('counter') || 0;
            document.querySelector('h1').innerHTML = counter;

            // add event listener to button
            const button = document.querySelector("button");
            button.addEventListener('click', increment);

            // increment counter, save to localstorage, and update DOM
            function increment(){
                counter++;
                localStorage.setItem('counter', counter);
                document.querySelector('h1').innerHTML = counter;
            }

        </script>
    </body>
</html>
```

```html
<html>
    <head>
        <title>Geolocation</title>
    </head>

    <body>

        <script>
            navigator.geolocation.getCurrentPosition(function(position) {
                document.write(position.coords.latitude + ", " + position.coords.longitude);
            })
        </script>
    </body>
</html>
```

```html
<script>
    let user1 = {
        firstName: "Ahmad",
        lastName: "Ali",
        age: 20,
    }

    for(const key in user1){
        console.log(`${key} is ${user1[key]}`);
    }

</script>
```

```
<script>
    const letters = ['A', 'B', 'C'];

    letters.forEach(sayLocation)

    function sayLocation(value, index){
        console.log(`${value} is at location ${index}`);
    }

</script>
```

```
<script>
    const array1 = [1, 2, 3, 4];
    const doubleArray1 = array1.map(element => element * 2);
    console.log(doubleArray1);

</script>
```

```html
<script>
    // filter creates a new array filled with elements that pass a test provided
    // filter() does not change the original array

    const array1 = [1, 2, 3, 4, 5];
    const filteredArray = array1.filter(element => element > 2);
    console.log(filteredArray);
</script>
```

```html
<html>
    <head>
        <title>Event Listener</title>
    </head>

    <body>
        <button >Click me</button>

        <script>
            const button =  document.querySelector("button");
            button.onclick = function(){
                console.log("Hi");
            }

            button.onclick = function(){
                console.log("How are you?");
            }

        </script>
    </body>
</html>
```

```html
<html>
    <head>
        <title>Event Listener</title>
    </head>

    <body>
        <button >Click me</button>

        <script>
            const button =  document.querySelector("button");
            button.addEventListener('click', function(){
                console.log("Hi");
            });

            button.addEventListener('click', function(){
                console.log("How are you?");
            });

        </script>
    </body>
</html>
```

```html
<script>
    // normal function
    const sayHi = function(name){
        console.log("Hi " + name);
    }

    // arrow function
    const sayHi2 = name => console.log("Hi " + name);



</script>
```

```html
<script>
    function greet(name, callback){
        console.log("Hi " + name);
        callback();
    }

    function goodbye(){
        console.log("Good Bye!");
    }

    greet('Ahmad', goodbye);
</script>
```

```html
<html>
    <head>
        <title>Blink</title>
    </head>

    <body>
        <h1>Hello World</h1>

        <script>
            function blinkBody(){
                const body = document.querySelector('body');
                if(body.style.visibility === 'hidden'){
                    body.style.visibility = 'visible';
                }
                else {
                    body.style.visibility = 'hidden';
                }
            }

            // after every .5 second run blinkBody
            setInterval(blinkBody, 1000);
        </script>
    </body>
</html>
```

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Document</title>
</head>
<body>
    <input type="text" placeholder="search for words">

    <script>
        const input = document.querySelector('input');

        function search(event){
            console.log(event);
        }



        const optimizedSearch = debounceFunc(search, 500);


        function debounceFunc(func, delay){
            // timer outside the return function (closure)
            let timer;
            return function(...args){
                const context = this;
                clearTimeout(timer);
                timer = setTimeout(()=> {
                    func.apply(context, args);
                }, delay);
            }
        }

        input.addEventListener('keyup', optimizedSearch);
        </script>
</body>
</html>
```

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Document</title>
</head>
<body>
    <input type="button" value="like">

    <script>
        const input = document.querySelector('input');

        function like(event){
            if(input.value === "like"){
                input.value = "liked";
            }else{
                input.value = "like";
            }
            console.log("liked");
        }

        const optimizedLike = throttleFunc(like, 1000);

        function throttleFunc(func, interval){
            let shouldFire = true;
            return function(){
                if(shouldFire){
                    func();
                    shouldFire = false;

                    setTimeout(() => {
                        shouldFire = true;
                    }, interval);
                }
            }
        }

        input.addEventListener('click', optimizedLike);
        </script>
</body>
</html>
```

```html
<html>
    <head>
        <title>To Do </title>
    </head>

    <body>
        <h1>Todo List</h1>

        <form >
            <input type="text" id="taskInput" placeholder="Enter a Task" autofocus>
            <input type="submit">
            <button onclick="deleteAll()">Clear all</button>
        </form>

        <ul></ul>

        <script>
            const form = document.querySelector('form');
            const list = document.querySelector('ul');
            const taskInput = document.querySelector('#taskInput');

            form.onsubmit = addTask;

            function addTask(){
                // third iteration
                // check for emptyness
                if(taskInput.value === "") {
                    taskInput.focus();
                    return false;
                }


                // create a <li> element
                const newTask =  document.createElement('li');
                newTask.innerHTML = taskInput.value;

                // add task to list
                list.appendChild(newTask);

                // create delete button
                const button = document.createElement('button');
                button.innerText = "delete";
```

```
43
44                  button.onclick = removeTask;
45
46                  newTask.appendChild(button);
47
48                  // second iteration
49                  // clean input after creating task
50                  taskInput.value = "";
51
52                  // prevent page reload
53                  return false;
54              }
55
56              // delete all tasks
57              function deleteAll(){
58                  list.innerHTML = "";
59              }
60
61              // remove a task
62              function removeTask(){
63                  this.parentElement.remove()
64              }
65
66          </script>
67      </body>
68  </html>
```

```
arrow functions (10 minutes)
this (10 minutes)
blink(interval) (15 minutes) [done]
autocomplete (15 minutes)
localstorage (10 minutes) [done]
geolocation (10 minutes) [done]
```