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Module 4 (JavaScript Basic and DOM) and MODULE: 2 (JavaScript Essentials)

(B7) What is JavaScript?

→ JavaScript is a programming language that executes on the browser. It turns static HTML web pages into interactive web pages by dynamically updating content, validating form data, controlling multimedia, animate images, and almost everything else on the web pages.

→ JavaScript is the third most important web technology after HTML and CSS. JavaScript can be used to create web and mobile applications, build web servers, create games, etc.

(B8) What is JavaScript Boxes?

→ JavaScript has three kind of popup boxes:

1) Alert box

2) Confirm box and

3) Prompt box.

1) Alert box :-

→ An alert box is often used if you want to make sure information comes through to the user. When an alert box pops up, the user will have to click "OK" to proceed.

2) Confirm box:-

→ A confirm box is often used if you want the user to verify or accept something. When a confirm box pops up, the user will have to click either "OK" or "Cancel" to proceed. If the user clicks "OK", the box returns true. If the user clicks "Cancel", the box returns false.

3) Prompt box :-

→ A prompt box is often used if you want the user to input a value before entering a page. When a prompt box pops up, the user will have to click either "OK" or "Cancel" to proceed after entering an input value. If the user clicks "OK" the box returns the input value. If the user clicks "Cancel" the box returns null.
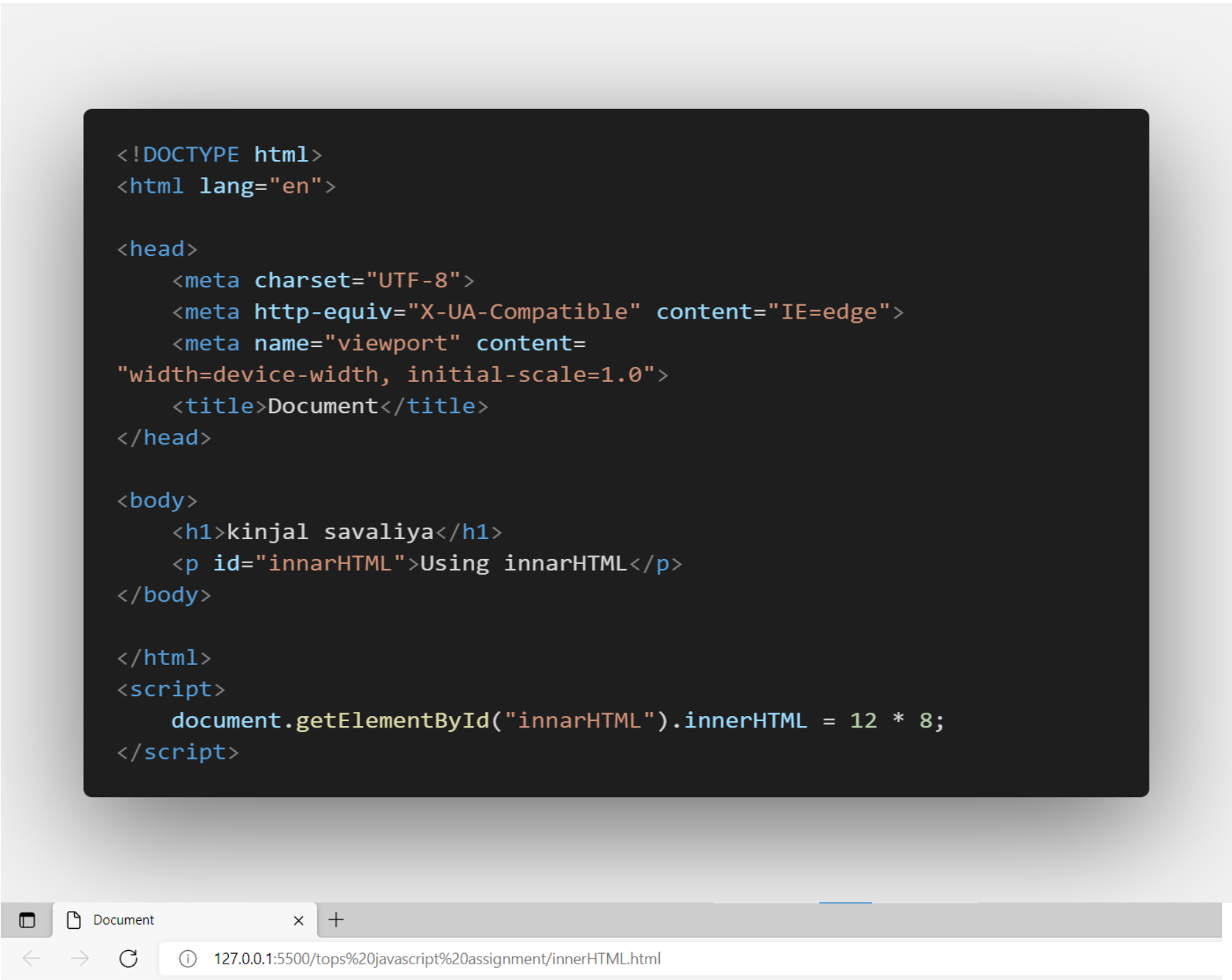
(B9) What is JavaScript Events ?

→ The change in the state of an object is known as an Event. In html, there are various events which represents that some activity is performed by the user or by the browser. When javascript code is included in HTML.

(B10) What is JavaScript Output method ?

→ Writing into an HTML element, using `innerHTML`.

→ Writing into the HTML output using `document.write()`.

→ Writing into an alert box, using `window.alert()`.

→ Writing into the browser console, using `console.log()`.

(I1) How to used JavaScript Output method ?

(1) Using innerHTML.

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content=
"width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <h1>kinjal savaliya</h1>
    <p id="innarHTML">Using innarHTML</p>
</body>

</html>
<script>
    document.getElementById("innarHTML").innerHTML = 12 * 8;
</script>
```
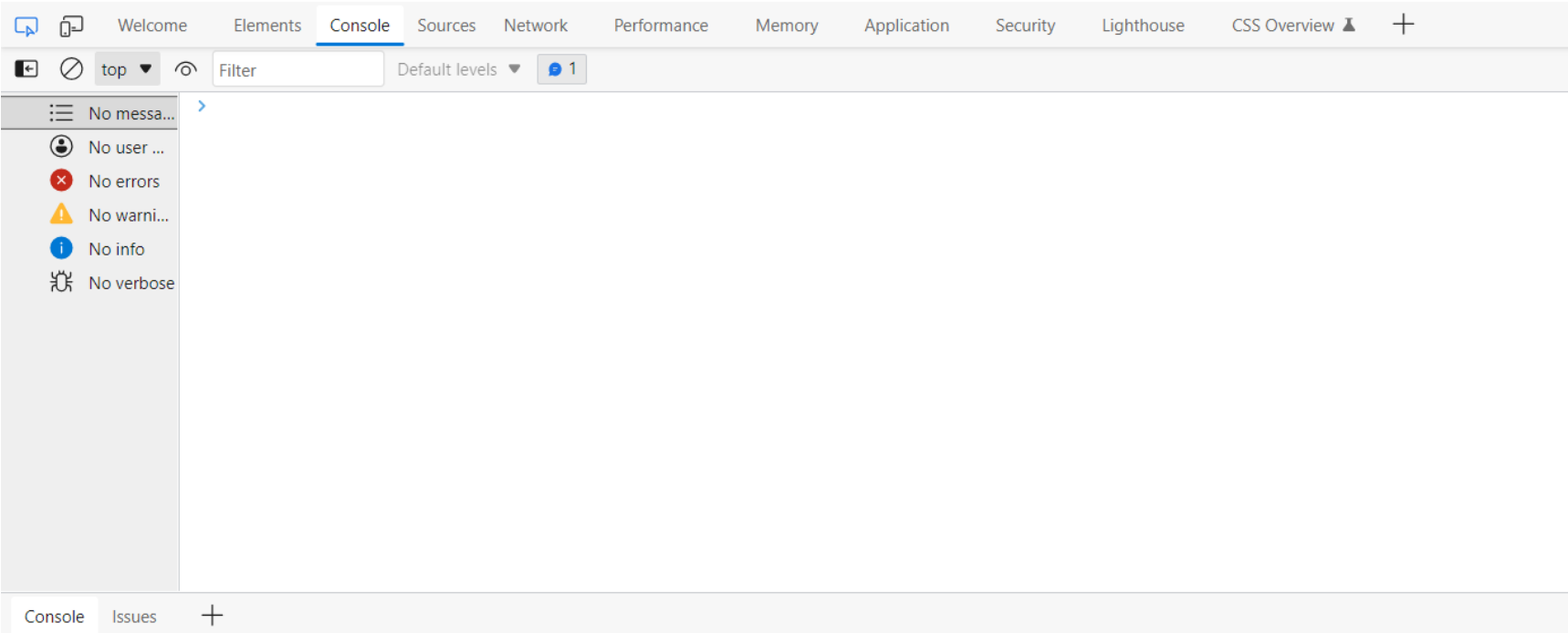
Document   × +

← → C ⓘ 127.0.0.1:5500/tops%20javascript%20assignment/innerHTML.html

kinjal savaliya

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Welcome   Elements   Console   Sources   Network   Performance   Memory   Application   Security   Lighthouse   CSS Overview ▲   +

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Console   Issues   +

(2) Using `document.write()`

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <h1>kinjal savaliya</h1>
</body>
<script>
    document.write("hellooooooo..........")
</script>

</html>
```
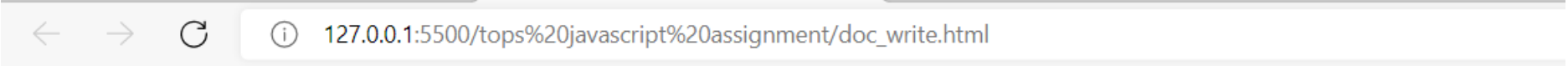
← → C ⓘ 127.0.0.1:5500/tops%20javascript%20assignment/doc_write.html

kinjal savaliya

hellooooooo..........

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⚠️ No warni...
ℹ️ No info
🐛 No verbose

(3) Using `window.alert()`

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <h1>kinjal savaliya</h1>
</body>

</html>
<script>
    window.alert("Hellooooo......")
</script>
```
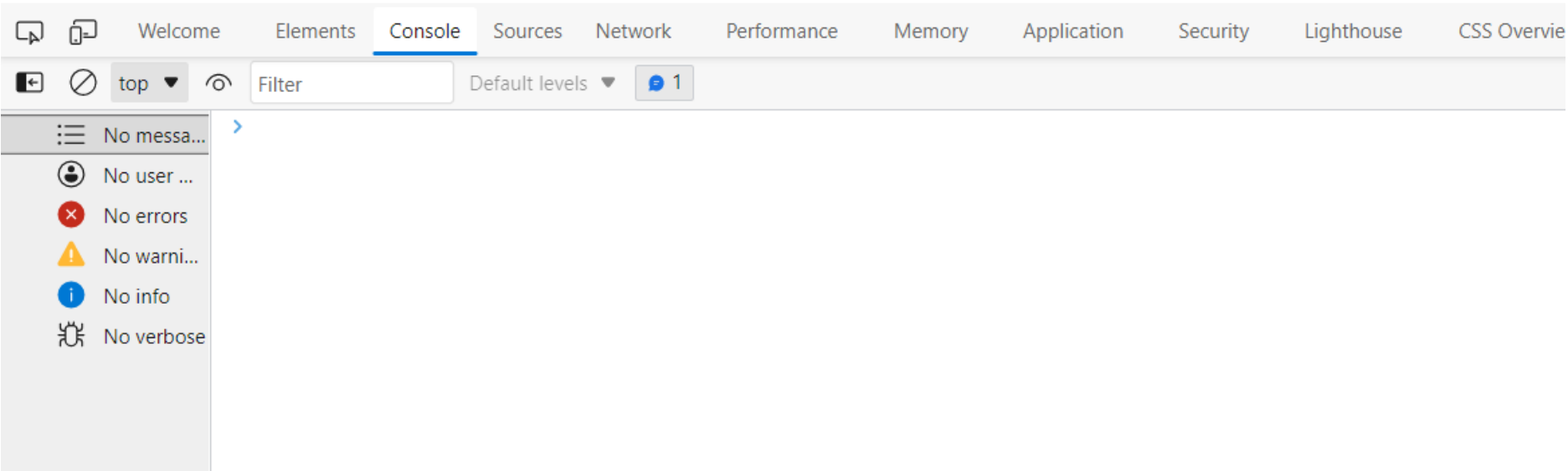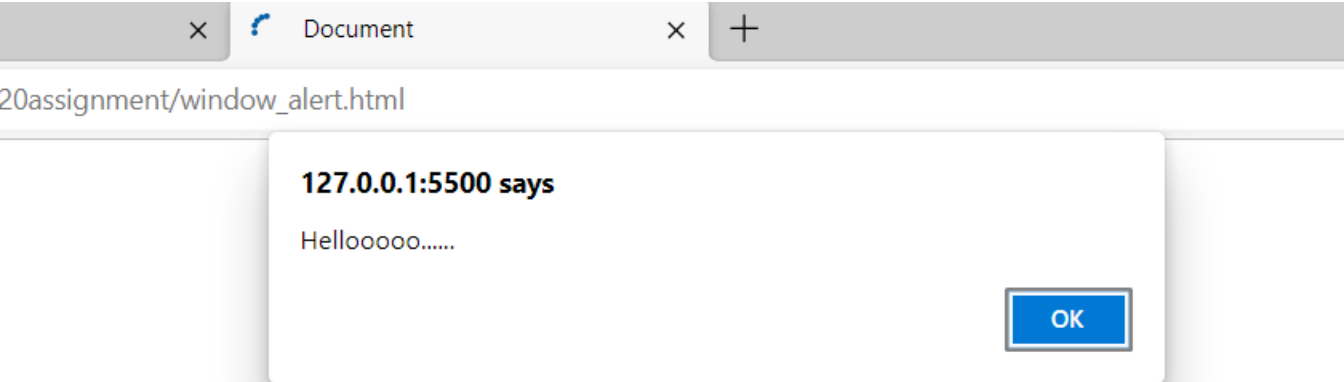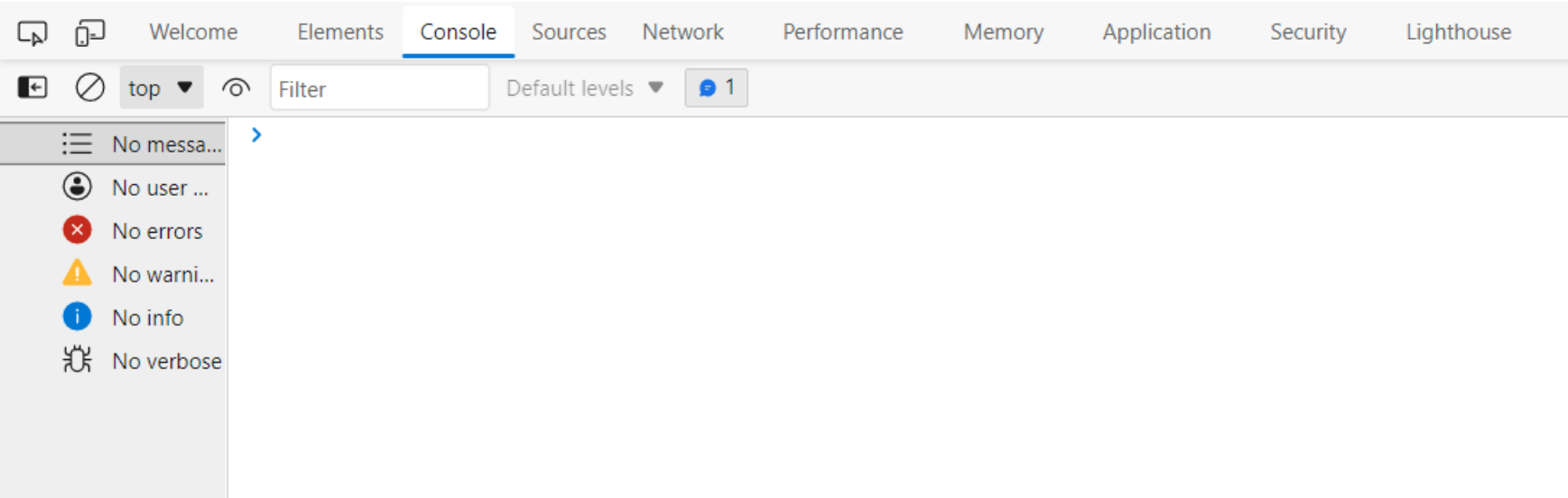
20assignment/window_alert.html

127.0.0.1:5500 says

Hellooooo......

OK

kinjal savaliya

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>

No messa...
No user ...
No errors
No warni...
No info
No verbose

(3) Using `console.log()`

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <h1>kinjal savaliya</h1>
</body>

</html>
<script>
    console.log("Hellooooo......")
</script>
```
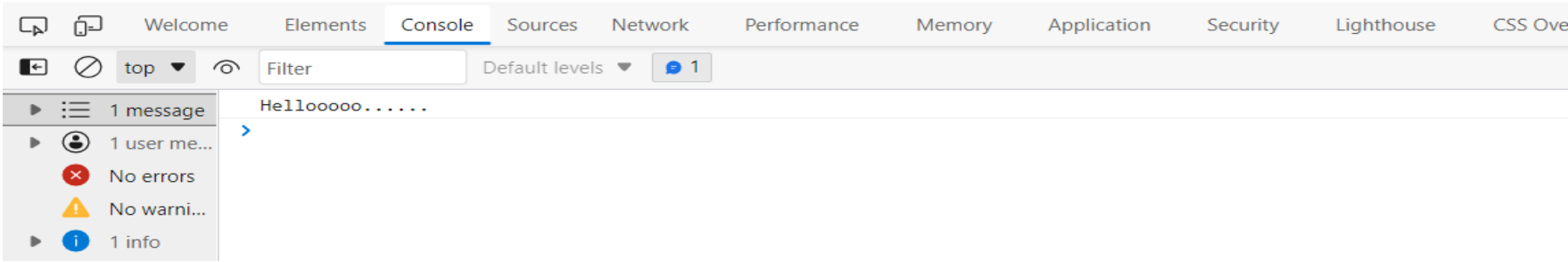
127.0.0.1:5500/tops%20javascript%20assignment/console.html

kinjal savaliya

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- 1 message   Hellooooo......
- 1 user me... >
- ❌ No errors
- ⚠️ No warni...
- ℹ️ 1 info

(I2) How to used JavaScript Events to Do all examples ?

1) Onclick:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <button onclick="a()">Click Here</button>
</body>

</html>
<script>
    function a() {
        console.log("Helloooooooo.......");
    }
</script>
```

2) Onmouseover:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <div id="hover" style="background-color: aquamarine;
                height: 200px;width: 200px;border: solid black;"></div>
    <button onmouseover="hover()">Hover here</button>
</body>

</html>
<script>
    function hover() {
        let a = document.getElementById('hover');
        a.style.backgroundColor = 'red';
    }
</script>
```

3) Onchange:

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>

<body>
    <h1>kinjal savliya</h1>
    <input type="text" onchange="alert(this.value)">
</body>

</html>
<script>

</script>
```

(I3) Calculate subtotal price of quantity in JavaScript ?

```html
<!doctype html>
<html lang="en">

<head>
    <!-- Required meta tags -->
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">

    <!-- Bootstrap CSS -->
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css"
    rel="stylesheet"integrity=
"sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3"
    crossorigin="anonymous">

    <title>Calculate subtotal price of quantity</title>
</head>

<body>
    <h1 class="text-center">Calculate subtotal price of quantity</h1>


    <table class="table table-striped" style="border:black ;">
        <thead>
            <tr>
                <th scope="col"></th>
                <th scope="col">Productinfo</th>
                <th scope="col">Quantity</th>
                <th scope="col">Price(per unit)</th>
                <th scope="col">Price(subtotal)</th>
                <th scope="col"></th>
            </tr>
        </thead>
        <tbody>
            <tr>
                <th scope="row">1</th>
                <td>
                    <div class="product" style="width: 130px;">
                        <img src="2.jpeg" class="card-img-top" alt="...">
                        <div class="card-body">
                            <p class="card-text">Watch</p>
                        </div>
                    </div>
                </td>
                <td><input type="number" id="pro1" class="qnty" onchange="Total(this.value)"
></td>
                <td value="" class="price">1500</td>
                <td id="watch" class="">1500</td>
                <td><button type="button" class="btn btn-primary">Remove</button></td>
            </tr>
            <tr>
                <th scope="row">2</th>
                <td>
                    <div class="product" style="width: 130px;">
                        <img src="3.jpeg" class="card-img-top" alt="...">
                        <div class="card-body">
                            <p class="card-text">Headphone</p>
                        </div>
                    </div>
                </td>
                <td><input type="number" id="headphone" onchange="Total1(this.value)"></td>
                <td class="price">700</td>
                <td id="Headphone">700</td>
                <td><button type="button" class="btn btn-primary">Remove</button></td>
            </tr>
            <tr>
                <th scope="row">3</th>
                <td>
                    <div class="product" style="width: 130px;">
                        <img src="4.jpeg" class="card-img-top" alt="...">
                        <div class="card-body">
                            <p class="card-text">Goggles</p>
                        </div>
                    </div>
                </td>
                <td><input type="number" id="goggles" onchange="Total2(this.value)"></td>
                <td class="price"> 800</td>
                <td id="Goggles"> 800</td>
                <td><button type="button" class="btn btn-primary">Remove</button></td>
            </tr>

        </tbody>
    </table>
    </fieldset>

    </form>
    </div>

    <!-- Optional JavaScript; choose one of the two! -->

    <!-- Option 1: Bootstrap Bundle with Popper -->
    <script src=
"https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js"
        integrity="sha384-ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p"
        crossorigin="anonymous"></script>

    <!-- Option 2: Separate Popper and Bootstrap JS -->
    <!--
    <script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js"
    integrity="sha384-7+zCNj/IqJ95wo16oMtfsKbZ9ccEh31eOz1HGyDuCQ6wgnyJNSYdrPa03rtR1zdB"
    crossorigin="anonymous"></script>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.min.js"
    integrity="sha384-QJHtvGhmr9XOIpI6YVutG+2QOK9T+ZnN4kzFN1RtK3zEFEIsxhlmWl5/YESvpZ13"
    crossorigin="anonymous"></script>
    -->
</body>

</html>
<script>

    function Total(value) {
        console.log(value);
        var price = document.getElementsByClassName('price')[0];
        console.log(price.textContent)
        // console.log(value * price.textContent)
        document.getElementById('watch').innerHTML = '₹' + value * price.textContent
    }
    function Total1(value) {
        console.log(value);
        var price = document.getElementsByClassName('price')[1];
        console.log(price.textContent)
        // console.log(value * price.textContent)
        document.getElementById('Headphone').innerHTML = '₹' + value * price.textContent
    }
    function Total2(value) {
        console.log(value);
        var price = document.getElementsByClassName('price')[2];
        console.log(price.textContent)
        // console.log(value * price.textContent)
        document.getElementById('Goggles').innerHTML = '₹' + value * price.textContent
    }
</script>
```

(I4) How to change images using onchange Events in JavaScript ?

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>change images(onchange events)</title>
</head>

<body>
    <h1 style="text-align:center;">Change images using onchange Events</h1>
    <div style="text-align:center">
        <select id="select-image" onchange="a(this.value)" style="font-size: 20px;">
            <option value="" src="">select images</option>
            <option value="5" src="5.jpeg"> 1</option>
            <option value="6" src="6.jpeg"> 2</option>
            <option value="7" src="7.jpeg"> 3</option>
            <option value="8" src="8.jpeg"> 4</option>
            <option value="9" src="9.jpeg"> 5</option>
        </select>
        <div class="text-center">
            <img src="5.jpeg" class="rounded" id="image"
                style="height: 500px; margin-top: 50px;border: 5px solid rgb(34, 174, 182);">
        </div>
    </div>

</body>

</html>
<script>
    function a(newimage) {
        document.getElementById('image').src = "./" + newimage + ".jpeg";

    }

</script>
```