**Module-4**

**A).Types of Functions**

1.clearTimeout()

<!DOCTYPE html>

<html>

<body>

    <h1>The cleartime out</h1>

    <button onclick="startCount()">Start count!</button>

    <input type="text" id="demo">

    <button onclick="stopCount()">Stop count!</button>

    <p>Click on "Start count!" to start the timer. The input field will count forever, starting at 0.</p>

    <p>Click on "Stop count!" to stop counting. Click on "Start count!" to start the timer again.</p>

    <script>

        let counter = 0;

        let timeout;

        let timer\_on = 0;

        function timedCount() {

            document.getElementById("demo").value = counter;

            counter++;

            timeout = setTimeout(timedCount, 1000);

        }

        function startCount() {

            if (!timer\_on) {

                timer\_on = 1;

                timedCount();

            }

        }

        function stopCount() {

            clearTimeout(timeout);

            timer\_on = 0;

        }

    </script>

</body>

</html>

Output:

**The clearTime Out**

Start count!  Stop count!

Click on "Start count!" to start the timer. The input field will count forever, starting at 0.

Click on "Stop count!" to stop counting. Click on "Start count!" to start the timer again.

2.setTimeout():

<!DOCTYPE html>

<html>

<body>

    <h2>The setTimeout() Method</h2>

    <p>Click the button. Wait 3 seconds for alert "Hello".</p>

    <button onclick="myFunction()">Try it</button>

    <script>

        let timeout;

        function myFunction() {

            timeout = setTimeout(alertFunc, 3000);

        }

        function alertFunc() {

            alert("Hello!");

        }

    </script>

</body>

</html>

Out put:

**The setTimeout() Method**

Click the button. Wait 3 seconds for alert "Hello".

Try it

3.setInterval():-

<!DOCTYPE html>

<html>

<body>

    <h2>The setInterval()</h2>

    <p id="demo"></p>

    <button onclick="myStopFunction()">Stop time</button>

    <script>

        const myInterval = setInterval(myTimer, 1000);

        function myTimer() {

            const date = new Date();

            document.getElementById("demo").innerHTML = date.toLocaleTimeString();

        }

    </script>

</body>

</html>

Out put:

**The setInterval()**

11:15:29 AM

Stop time

4.clearInterval(

<!DOCTYPE html>

<html>

<body>

    <h2>clearInterval() Methods</h2>

    <p id="demo"></p>

    <button onclick="myStop()">Stop the time</button>

    <script>

        const myInterval = setInterval(myTimer, 1000);

        function myTimer() {

            const date = new Date();

            document.getElementById("demo").innerHTML = date.toLocaleTimeString();

        }

        function myStop() {

            clearInterval(myInterval);

        }

    </script>

</body>

</html>

Out put:

**clearInterval() Methods**

11:18:10 AM

Stop the time

5.Exercise:

* Write a JavaScript code to do online booking of theatre tickets and calculate the total price based on the below conditions.

<!DOCTYPE html>

<html>

<head>

    <title>Booking Summary</title>

    <style>

        div#maincontent {

            height: 250px;

            width: 500px;

            border: 1px solid #CEE2FA;

            text-align: left;

            color: #08438E;

            font-family: calibri;

            font-size: 20;

            padding: 5px;

        }

        div#heading {

            text-decoration: bold;

            text-align: center;

            margin-top: 80px;

            width: 500px;

            border: 1px solid #CEE2FA;

            text-align: center;

            color: #08438E;

            background-color: #CEE2FA;

            font-family: calibri;

            font-size: 20;

            padding: 5px;

        }

        h2 {

            padding: 0;

            margin: 0;

        }

    </style>

</head>

<body>

    <center>

        <div id="heading">

            <h2>Booking Summary</h2>

        </div>

        <div id="maincontent">

            <script>

                let ticketp = 9;

                document.write(

                    "Actual cost per ticket:$" +

                    ticketp +

                    "<br><br>" +

                    "4 seats are eligible for festive discount!! " +

                    "<br><br>"

                );

                let seats = prompt(" enter no of seats");

                let calculatecost = (seats) => {

                    return seats \* ticketp;

                };

                if (seats <= 2) {

                    document.write("amount payble: $" + calculatecost(seats));

                } else if (seats >= 6) {

                    document.write("booking is not allowed");

                } else if (seats >= 2 && seats <= 5) {

                    let dis = [0.1, 1, 5, 7, 9, 11];

                    let calculatediscount = (seats) => {

                        return (calculatecost(seats) \* dis[seats]) / 100;

                    };

                    document.write("5 %  discount ! on Ticket 1");

                    document.write("<br/>");

                    document.write("7 %  discount!  on Ticket 2");

                    document.write("<br/>");

                    document.write("9 %  discount ! on Ticket 3");

                    document.write("<br/>");

                    document.write("11 %  discount ! on Ticket 4");

                    document.write("<br/>");

                    document.write("<br> Amount payable: $" + (calculatecost(seats) - calculatediscount(seats)));

                }

            </script>

        </div>

    </center>

</body>

</html>

Out put:

**Booking Summary**

Actual cost per ticket:$9  
  
4 seats are eligible for festive discount!!  
  
5 % discount ! on Ticket 1  
7 % discount! on Ticket 2  
9 % discount ! on Ticket 3  
11 % discount ! on Ticket 4  
  
Amount payable: $32.76

6.Function Parameters

<html>

<body>

    <script>

        function multiply(num1, num2) {

            if (num2 == undefined) {

                num2 = 1;

            }

            return num1 \* num2;

        }

        document.writeln(multiply(5, 6)); // 30

        document.writeln(multiply(5)); // 5

    </script>

</body>

</html>

Out put:

30 5

7.Default Parameters

<html>

<body>

    <script>

        function multiply(num1, num2 = 1) {

            return num1 \* num2;

        }

        document.write(multiply(5, 5)); //25

        document.write(multiply(10)); //10

        document.write(multiply(10, undefined)); //10

    </script>

</body>

</html>

**Out put:**

**25**

**10**

**10**

8.Nested Function

<html>

<body>

    <script>

        function giveMessage(message) {

            let userMsg = message;

            function toUser(userName) {

                let name = userName;

                let greet = userMsg + " " + name;

                return greet;

            }

            userMsg = toUser("Bob");

            return userMsg;

        }

        document.write(giveMessage("The world says hello dear: "));

    </script>

</body>

</html>

Out put:

The world says hello dear: Bob