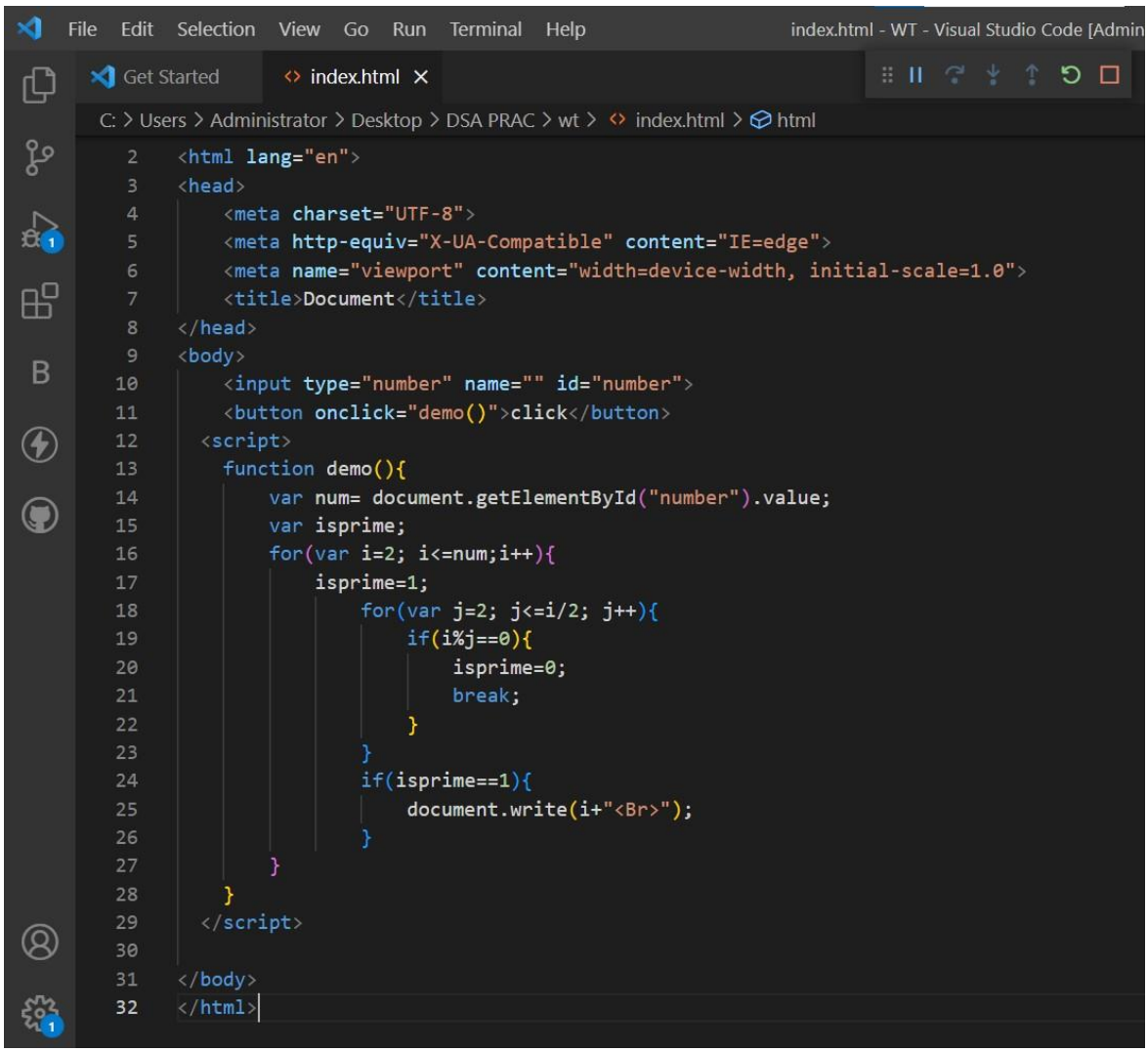
Practical-3

Aim: JS scope & hoisting, Function, Operators and Loops, Date\

- **Print prime Numbers up to given value in the input box**



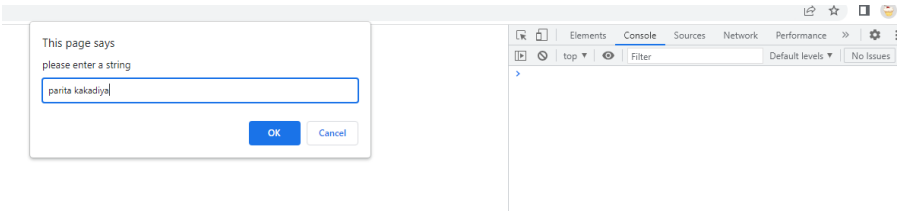
Output:

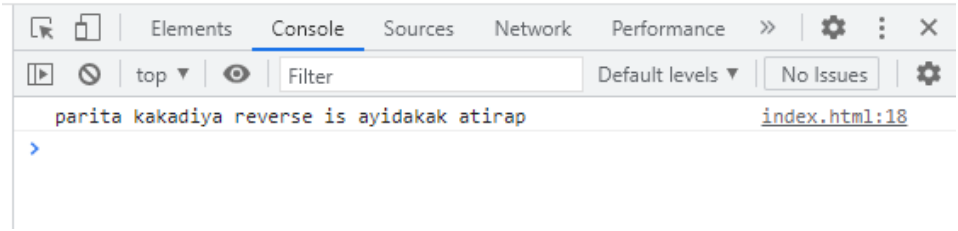
Conclusion: in this practical we learn that how to print prime number up to given value using the input box in JavaScript.

- **Write Script to reverse the given input string**

```
<!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>
<script type="text/javascript">
    //hello
    //olleh
    var string = prompt("please enter a string");
    var strLen = string.length;
    var revstr ='';
    for (var i = strLen-1;i>=0;i--){
        revstr += string[i];
    }
    console.log(`${string} reverse is ${revstr}`);


</script>
<body>

</body>
</html>
```

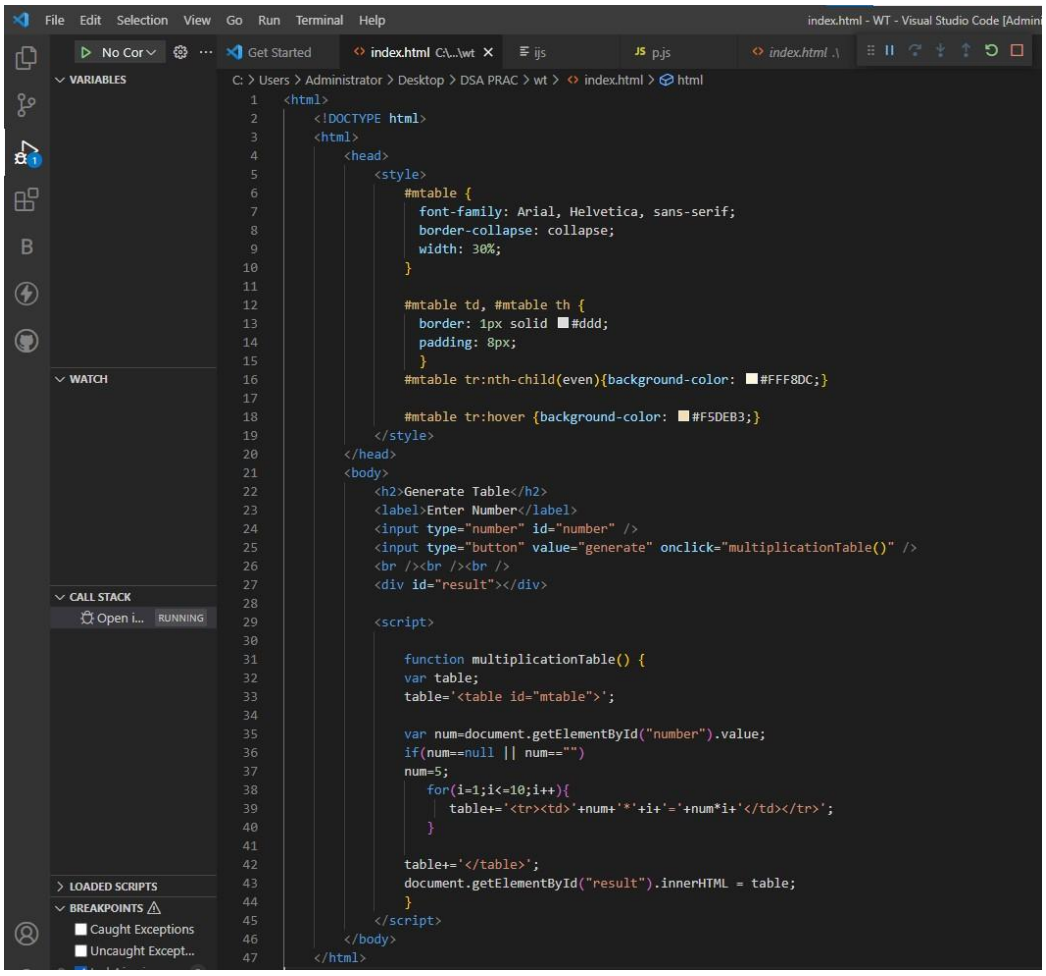
Output:





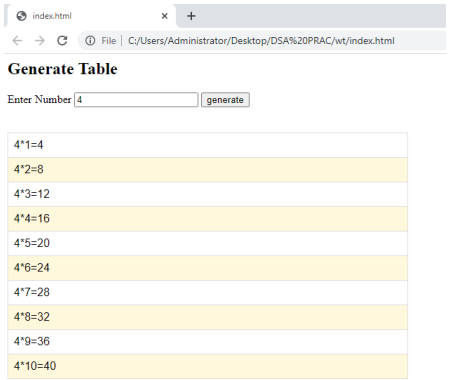
Conclusion: in this practical we learn that how to write a reverse script of given input string in JavaScript.

- **Create Dynamic Multiplication Table using inputs**



```
<html>
    <!DOCTYPE html>
    <html>
        <head>
            <style>
                #mtable {
                  font-family: Arial, Helvetica, sans-serif;
                  border-collapse: collapse;
                  width: 30%;
                }

                #mtable td, #mtable th {
                  border: 1px solid #ddd;
                  padding: 8px;
                }
                #mtable tr:nth-child(even){background-color: #FFF8DC;}

                #mtable tr:hover {background-color: #F5DEB3;}
            </style>
        </head>
        <body>
            <h2>Generate Table</h2>
            <label>Enter Number</label>
            <input type="number" id="number" />
            <input type="button" value="generate" onclick="multiplicationTable()" />
            <br /><br /><br />
            <div id="result"></div>

            <script>

                function multiplicationTable() {
                var table;
                table='<table id="mtable">';

                var num=document.getElementById("number").value;
                if(num==null || num=="")
                num=5;
                   for(i=1;i<=10;i++){
                     table+='<tr><td>'+num+'*'+i+'='+num*i+'</td></tr>';
                   }

                table+='</table>';
                document.getElementById("result").innerHTML = table;
                }
            </script>
        </body>
    </html>
```

Output:



index.html

File | C:/Users/Administrator/Desktop/DSA%20PRAC/wt/index.html

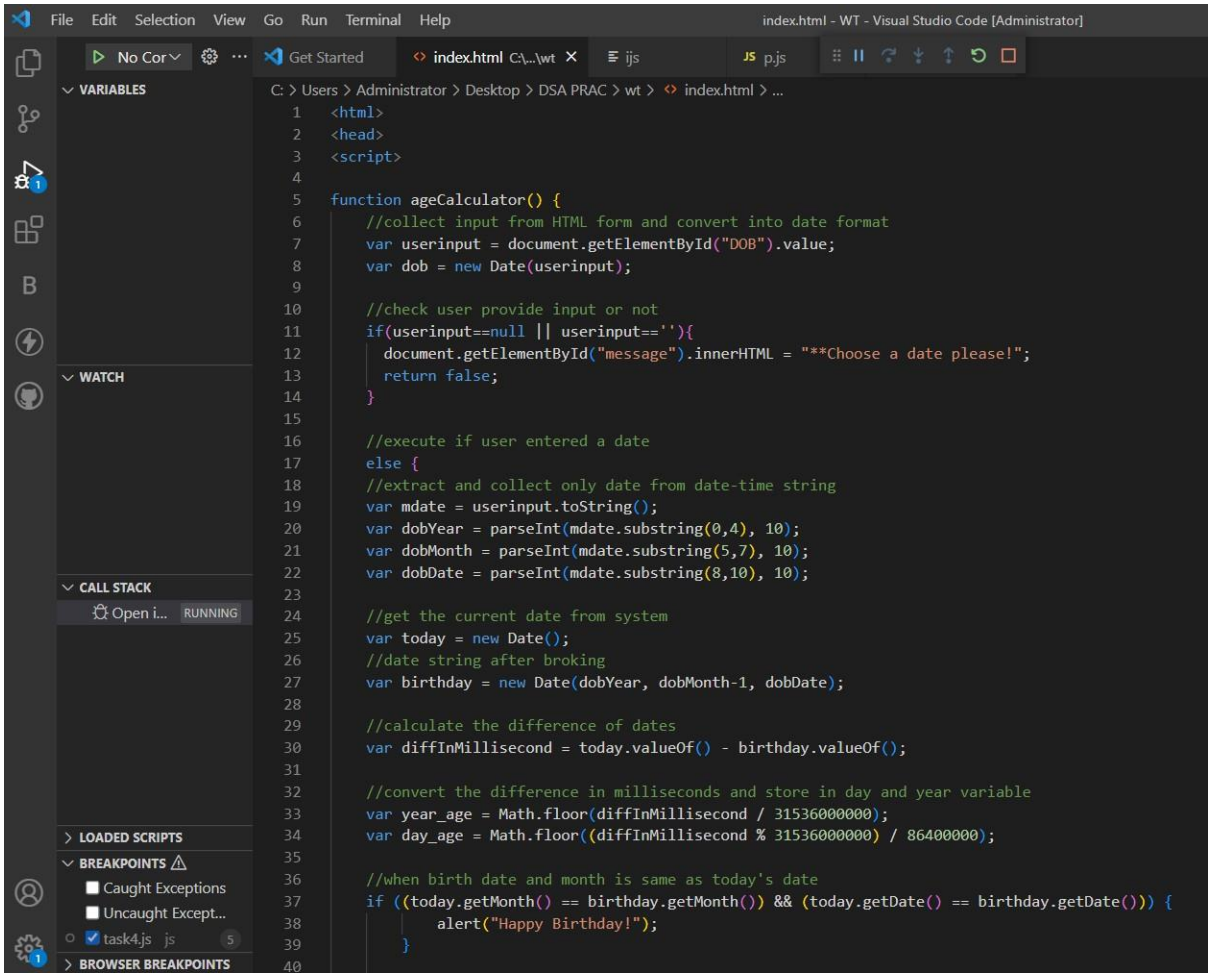
Generate Table

Enter Number 4 generate

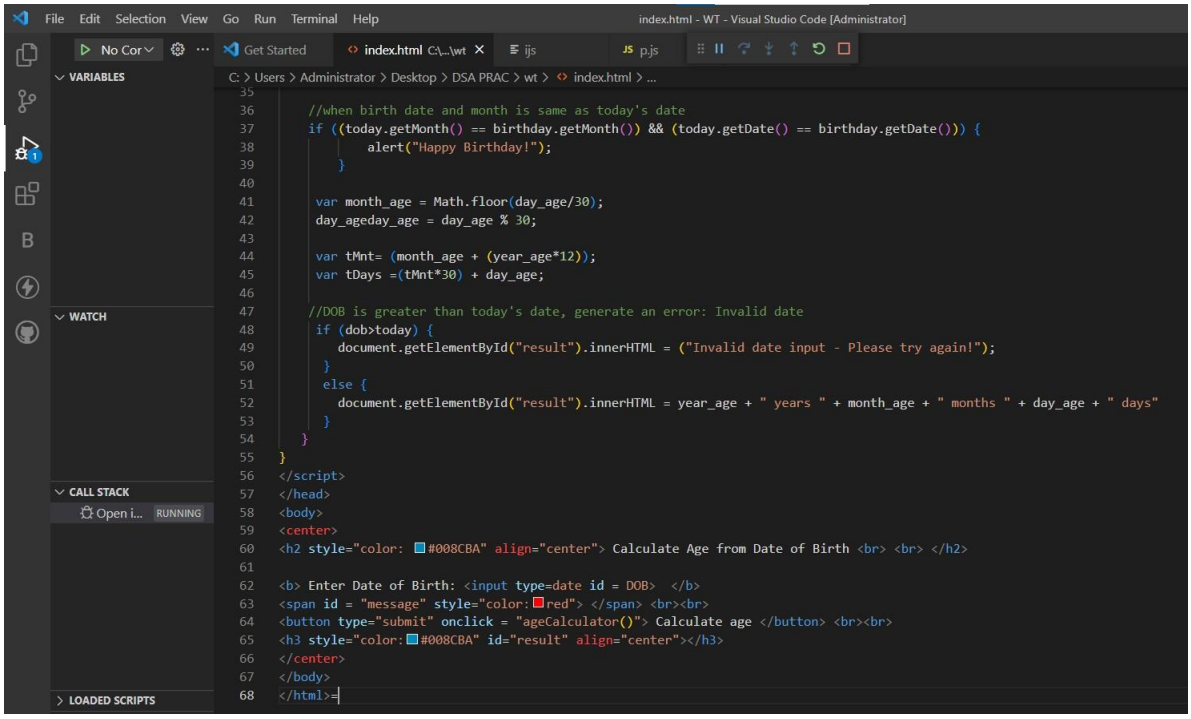
4*1=4
4*2=8
4*3=12
4*4=16
4*5=20
4*6=24
4*7=28
4*8=32
4*9=36
4*10=40

Conclusion: in this practical we learn that how to create multiplication tables using input in JavaScript.

- **Find the Age from input date. (Ex. 17 Yrs., 3 Monts,13 Days)**

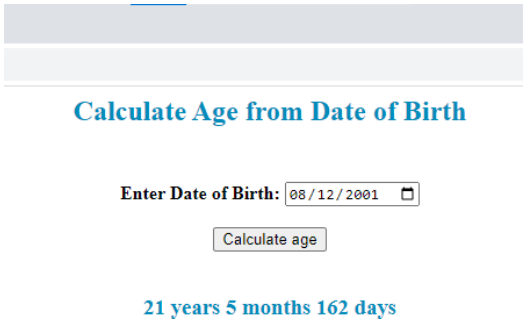


```
<html>
<head>
<script>

function ageCalculator() {
    //collect input from HTML form and convert into date format
    var userinput = document.getElementById("DOB").value;
    var dob = new Date(userinput);

    //check user provide input or not
    if(userinput==null || userinput==''){
      document.getElementById("message").innerHTML = "**Choose a date please!";
      return false;
    }

    //execute if user entered a date
    else {
    //extract and collect only date from date-time string
    var mdate = userinput.toString();
    var dobYear = parseInt(mdate.substring(0,4), 10);
    var dobMonth = parseInt(mdate.substring(5,7), 10);
    var dobDate = parseInt(mdate.substring(8,10), 10);

    //get the current date from system
    var today = new Date();
    //date string after broking
    var birthday = new Date(dobYear, dobMonth-1, dobDate);

    //calculate the difference of dates
    var diffInMillisecond = today.valueOf() - birthday.valueOf();

    //convert the difference in milliseconds and store in day and year variable
    var year_age = Math.floor(diffInMillisecond / 31536000000);
    var day_age = Math.floor((diffInMillisecond % 31536000000) / 86400000);

    //when birth date and month is same as today's date
    if ((today.getMonth() == birthday.getMonth()) && (today.getDate() == birthday.getDate())) {
          alert("Happy Birthday!");
        }
```



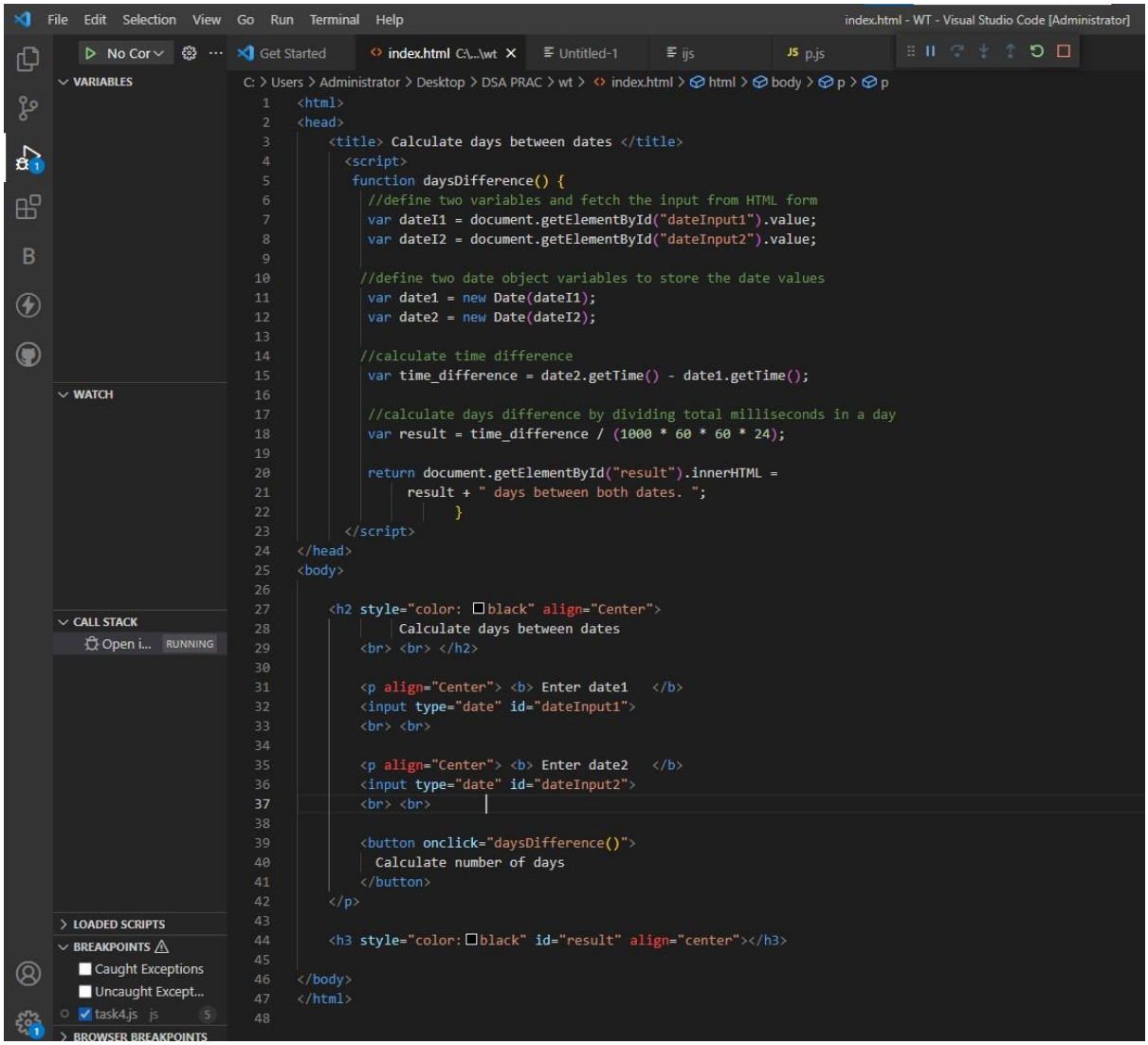
```
    //when birth date and month is same as today's date
    if ((today.getMonth() == birthday.getMonth()) && (today.getDate() == birthday.getDate())) {
          alert("Happy Birthday!");
        }

    var month_age = Math.floor(day_age/30);
    day_ageday_age = day_age % 30;

    var tMnt= (month_age + (year_age*12));
    var tDays =(tMnt*30) + day_age;

    //DOB is greater than today's date, generate an error: Invalid date
    if (dob>today) {
      document.getElementById("result").innerHTML = ("Invalid date input - Please try again!");
    }
    else {
      document.getElementById("result").innerHTML = year_age + " years " + month_age + " months " + day_age + " days"
    }
  }
}
</script>
</head>
<body>
<center>
<h2 style="color: #008CBA" align="center"> Calculate Age from Date of Birth <br> <br> </h2>

<b> Enter Date of Birth: <input type=date id = DOB>  </b>
<span id = "message" style="color:red"> </span> <br><br>
<button type="submit" onclick = "ageCalculator()"> Calculate age </button> <br><br>
<h3 style="color:#008CBA" id="result" align="center"></h3>
</center>
</body>
</html>
```

Output:



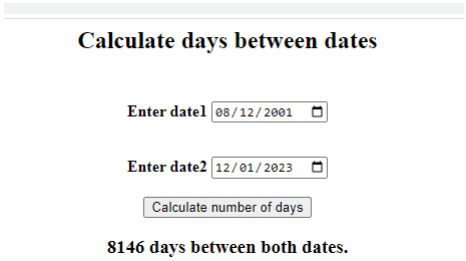
Conclusion: in this practical we learn that how to find the age from the date of birth in years, months and days in JavaScript.

- **Find the No. of Days between two given dates**



```
<html>
<head>
    <title> Calculate days between dates </title>
      <script>
       function daysDifference() {
         //define two variables and fetch the input from HTML form
         var dateI1 = document.getElementById("dateInput1").value;
         var dateI2 = document.getElementById("dateInput2").value;

        //define two date object variables to store the date values
         var date1 = new Date(dateI1);
         var date2 = new Date(dateI2);

        //calculate time difference
         var time_difference = date2.getTime() - date1.getTime();

         //calculate days difference by dividing total milliseconds in a day
         var result = time_difference / (1000 * 60 * 60 * 24);

         return document.getElementById("result").innerHTML =
              result + " days between both dates. ";
                  }
      </script>
</head>
<body>

    <h2 style="color: black" align="Center">
            Calculate days between dates
        <br> <br> </h2>

        <p align="Center"> <b> Enter date1   </b>
        <input type="date" id="dateInput1">
        <br> <br>

        <p align="Center"> <b> Enter date2   </b>
        <input type="date" id="dateInput2">
        <br> <br>

        <button onclick="daysDifference()">
          Calculate number of days
        </button>
    </p>

    <h3 style="color:black" id="result" align="center"></h3>

</body>
</html>
```

Output:



Conclusion: in this practical we learn that how to find the number of days between two days in JavaScript.