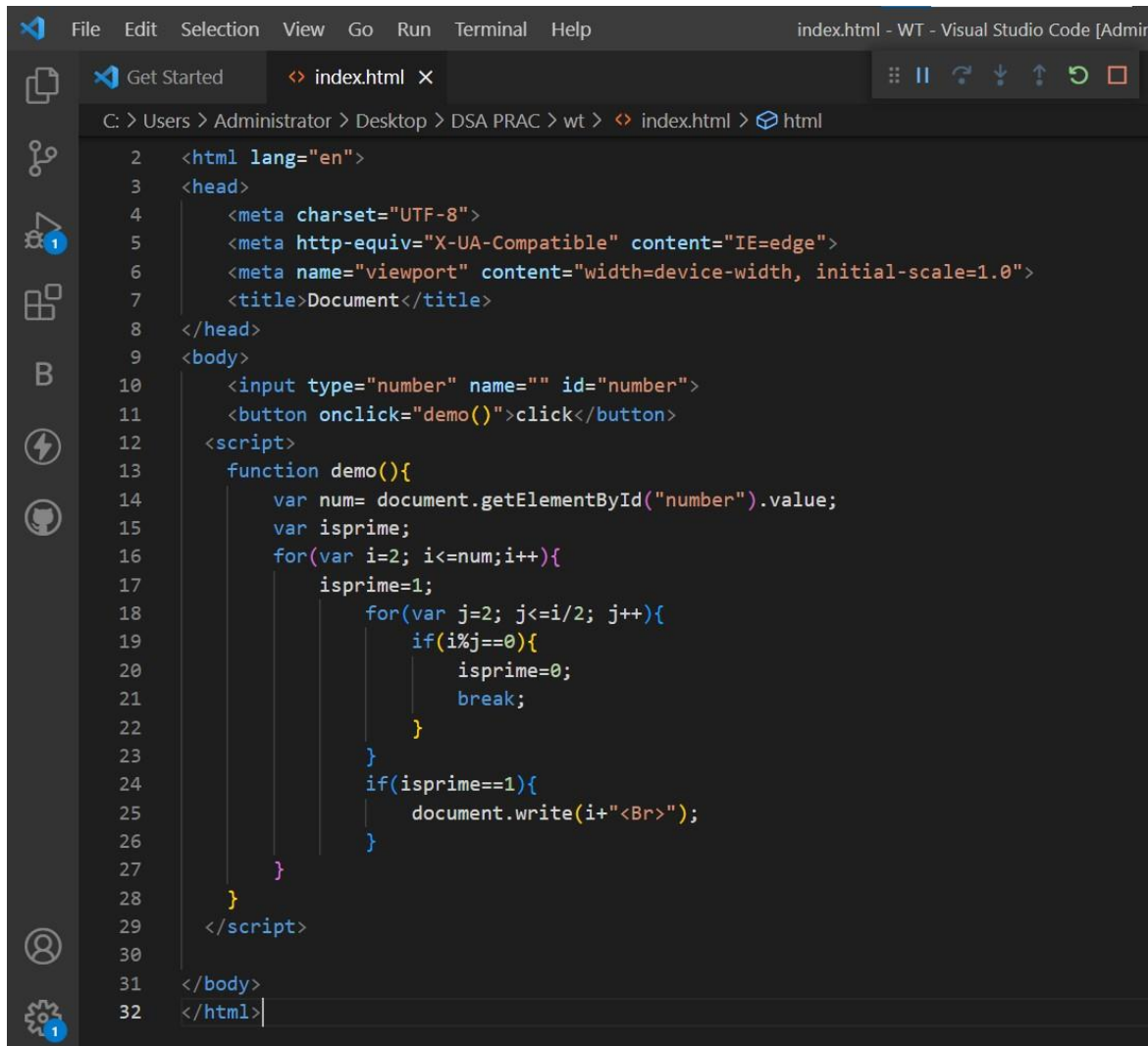


Practical-3

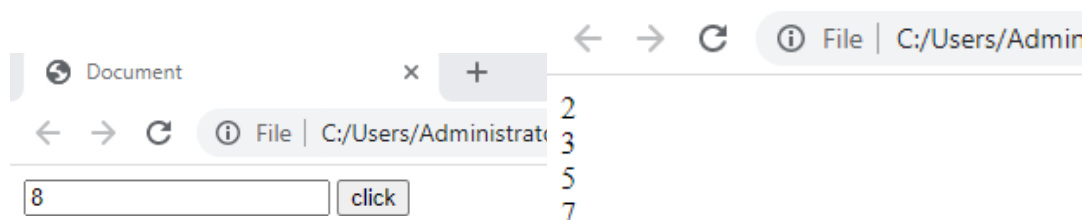
Aim: JS scope & hoisting, Function, Operators and Loops, Date

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



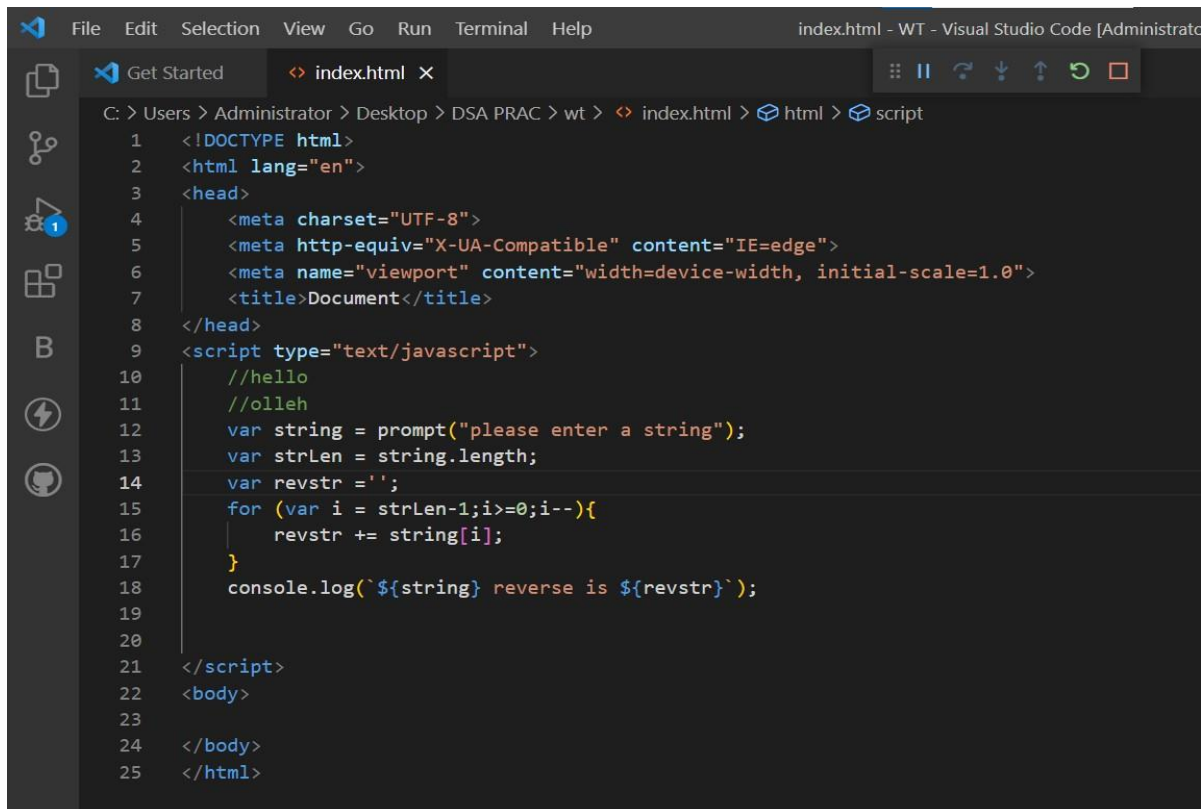
```
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta http-equiv="X-UA-Compatible" content="IE=edge">
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <title>Document</title>
8 </head>
9 <body>
10  <input type="number" name="" id="number">
11  <button onclick="demo()">click</button>
12  <script>
13    function demo(){
14      var num= document.getElementById("number").value;
15      var isprime;
16      for(var i=2; i<=num;i++){
17        isprime=1;
18        for(var j=2; j<=i/2; j++){
19          if(i%j==0){
20            isprime=0;
21            break;
22          }
23        }
24        if(isprime==1){
25          document.write(i+"<Br>");
26        }
27      }
28    }
29  </script>
30
31 </body>
32 </html>
```

Output:



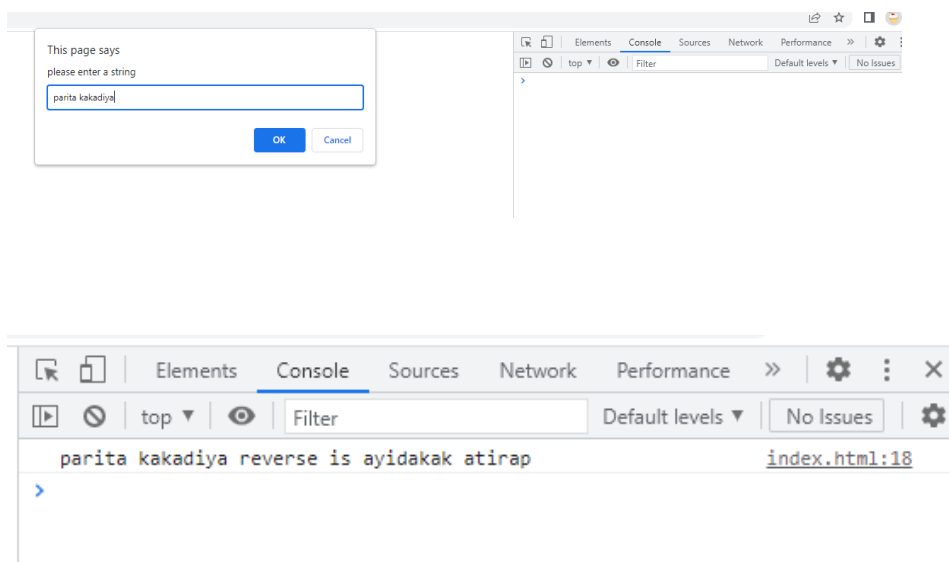
Conclusion: in this practical we learn that how to print prime number up to given value using the input box in JavaScript.

- Write Script to reverse the given input string



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta http-equiv="X-UA-Compatible" content="IE=edge">
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <title>Document</title>
8 </head>
9 <script type="text/javascript">
10   //hello
11   //olleh
12   var string = prompt("please enter a string");
13   var strLen = string.length;
14   var revstr = '';
15   for (var i = strLen-1; i>=0; i--){
16     revstr += string[i];
17   }
18   console.log(`${string} reverse is ${revstr}`);
19
20
21 </script>
22 <body>
23
24 </body>
25 </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**

```

1  <html>
2  <!DOCTYPE html>
3  <html>
4  <head>
5      <style>
6          #mtable {
7              font-family: Arial, Helvetica, sans-serif;
8              border-collapse: collapse;
9              width: 30%;
10         }
11
12         #mtable td, #mtable th {
13             border: 1px solid #ddd;
14             padding: 8px;
15         }
16         #mtable tr:nth-child(even){background-color: #FFF8DC;}
17
18         #mtable tr:hover {background-color: #F5DEB3;}
19     </style>
20 </head>
21 <body>
22     <h2>Generate Table</h2>
23     <label>Enter Number</label>
24     <input type="number" id="number" />
25     <input type="button" value="generate" onclick="multiplicationTable()" />
26     <br /><br />
27     <div id="result"></div>
28
29     <script>
30
31         function multiplicationTable() {
32             var table;
33             table='<table id="mtable">';
34
35             var num=document.getElementById("number").value;
36             if(num==null || num=="")
37                 num=5;
38             for(i=1;i<=10;i++){
39                 table+='<tr><td>' +num+ '*' +i+'=' +num*i+'</td></tr>';
40             }
41
42             table+='</table>';
43             document.getElementById("result").innerHTML = table;
44         }
45     </script>
46 </body>
47 </html>

```

Output:

index.html x +

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

Generate Table

Enter Number

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)

```

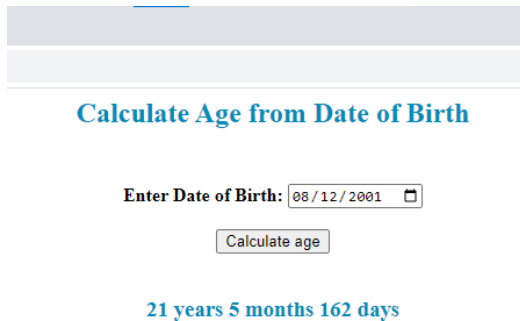
1  <html>
2  <head>
3  <script>
4
5  function ageCalculator() {
6      //collect input from HTML form and convert into date format
7      var userInput = document.getElementById("DOB").value;
8      var dob = new Date(userInput);
9
10     //check user provide input or not
11     if(userinput==null || userInput==''){
12         document.getElementById("message").innerHTML = "***Choose a date please!";
13         return false;
14     }
15
16     //execute if user entered a date
17     else {
18         //extract and collect only date from date-time string
19         var mdate = userInput.toString();
20         var dobYear = parseInt(mdate.substring(0,4), 10);
21         var dobMonth = parseInt(mdate.substring(5,7), 10);
22         var dobDate = parseInt(mdate.substring(8,10), 10);
23
24         //get the current date from system
25         var today = new Date();
26         //date string after broking
27         var birthday = new Date(dobYear, dobMonth-1, dobDate);
28
29         //calculate the difference of dates
30         var diffInMillisecond = today.valueOf() - birthday.valueOf();
31
32         //convert the difference in milliseconds and store in day and year variable
33         var year_age = Math.floor(diffInMillisecond / 31536000000);
34         var day_age = Math.floor((diffInMillisecond % 31536000000) / 86400000);
35
36         //when birth date and month is same as today's date
37         if ((today.getMonth() == birthday.getMonth()) && (today.getDate() == birthday.getDate())) {
38             alert("Happy Birthday!");
39         }
40

```

```

35
36     //when birth date and month is same as today's date
37     if ((today.getMonth() == birthday.getMonth()) && (today.getDate() == birthday.getDate())) {
38         alert("Happy Birthday!");
39     }
40
41     var month_age = Math.floor(day_age/30);
42     day_ageday_age = day_age % 30;
43
44     var tMnt= (month_age + (year_age*12));
45     var tDays =(tMnt*30) + day_age;
46
47     //DOB is greater than today's date, generate an error: Invalid date
48     if (dob>today) {
49         document.getElementById("result").innerHTML = ("Invalid date input - Please try again!");
50     }
51     else {
52         document.getElementById("result").innerHTML = year_age + " years " + month_age + " months " + day_age + " days"
53     }
54 }
55
56 </script>
57 </head>
58 <body>
59 <center>
60 <h2 style="color: #008CBA" align="center"> Calculate Age from Date of Birth <br> <br> </h2>
61
62 <b> Enter Date of Birth: <input type=date id = DOB> </b>
63 <span id = "message" style="color:red"> </span> <br><br>
64 <button type="submit" onclick = "ageCalculator()"> Calculate age </button> <br><br>
65 <h3 style="color:#008CBA" id="result" align="center"></h3>
66 </center>
67 </body>
68 </html>=

```

Output:

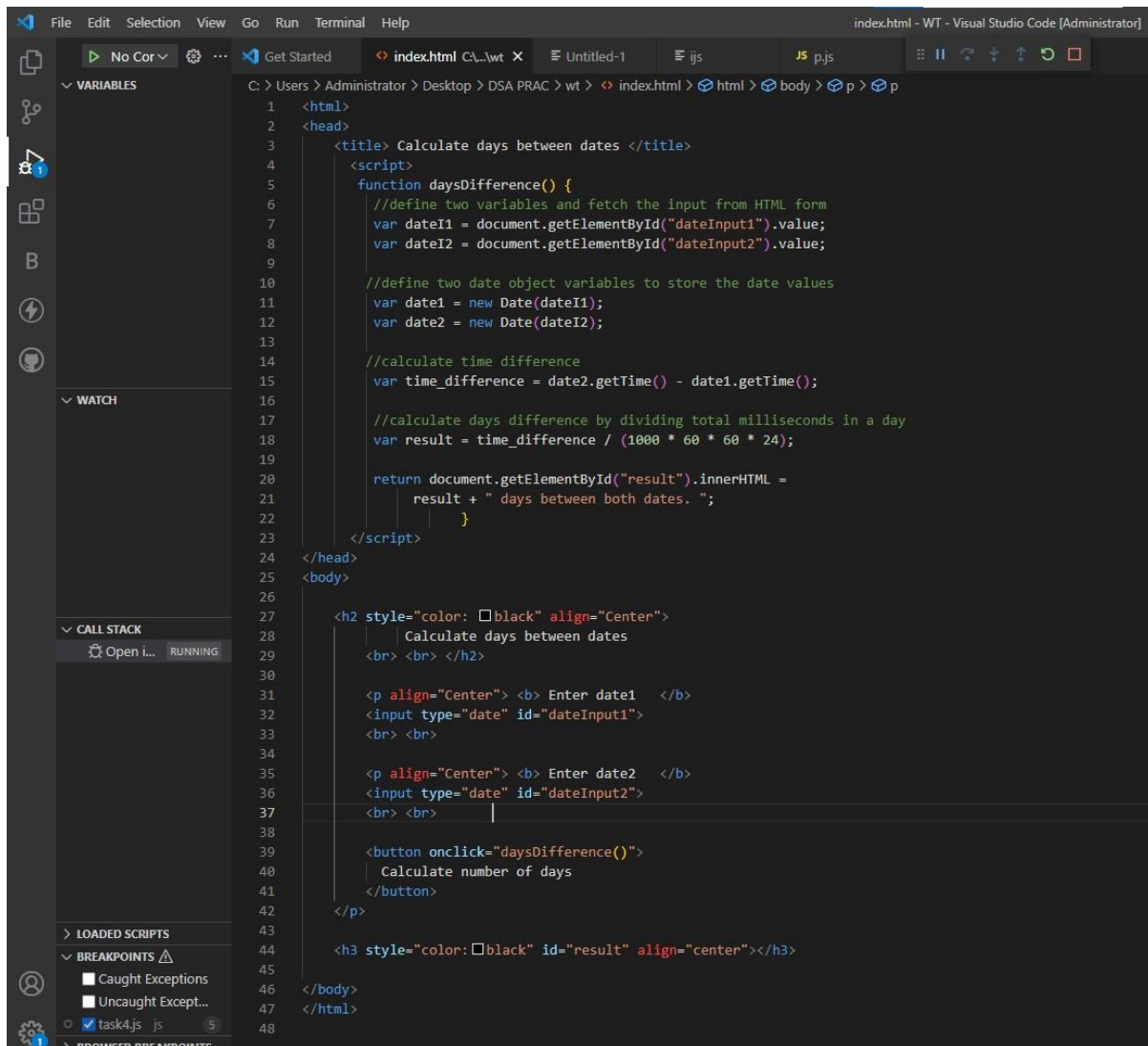
Calculate Age from Date of Birth

Enter Date of Birth:

21 years 5 months 162 days

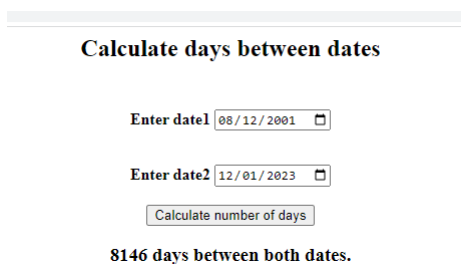
Conclusion: in this practical we learn that how to find the age from the date of birth in years, months and days in JavaScript.

- Find the No. of Days between two given dates



```
1 <html>
2 <head>
3   <title> Calculate days between dates </title>
4   <script>
5     function daysDifference() {
6       //define two variables and fetch the input from HTML form
7       var date1 = document.getElementById("dateInput1").value;
8       var date2 = document.getElementById("dateInput2").value;
9
10      //define two date object variables to store the date values
11      var date1 = new Date(date1);
12      var date2 = new Date(date2);
13
14      //calculate time difference
15      var time_difference = date2.getTime() - date1.getTime();
16
17      //calculate days difference by dividing total milliseconds in a day
18      var result = time_difference / (1000 * 60 * 60 * 24);
19
20      return document.getElementById("result").innerHTML =
21        result + " days between both dates. ";
22    }
23  </script>
24 </head>
25 <body>
26
27   <h2 style="color: black" align="Center">
28     Calculate days between dates
29   </h2>
30
31   <p align="Center"> <b> Enter date1 </b>
32   <input type="date" id="dateInput1">
33   <br> <br>
34
35   <p align="Center"> <b> Enter date2 </b>
36   <input type="date" id="dateInput2">
37   <br> <br>
38
39   <button onclick="daysDifference()">
40     Calculate number of days
41   </button>
42
43
44   <h3 style="color: black" id="result" align="center"></h3>
45
46 </body>
47 </html>
48
```

Output:



Calculate days between dates

Enter date1

Enter date2

8146 days between both dates.

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