

DEU CENG



# CME4414

## LAB SHEET #3

JavaScript

## JavaScript

JavaScript code must be inserted between <script> and </script> tags.

Scripts can be placed in the

- <body>
- <head> section of an HTML page
- in both

```
<script type = "text/javascript" src = "tst_number.js" >
</script>
```

Display data in different ways: Writing

- into an HTML element (using innerHTML)
  - document.getElementById(id)
- into the HTML output
  - document.write(15 + 6);
- into an alert box
  - window.alert(23 + 6);
- into the browser console
  - console.log(5 + 7);

## Sample1: JavaScript in Head

```
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction() {
    document.getElementById("p1").innerHTML = "Paragraph changed.";
}
</script>
</head>
<body>

<h2>JavaScript in Head</h2>

<p id="p1">Paragraph</p>

<button type="button" onclick="myFunction()">Change Paragraph</button>

</body>
</html>
```

## Sample1: JavaScript in Body

```
<!DOCTYPE html>
<html>
<body>

<h1>A Web Page</h1>
<p id="p1">A Paragraph</p>
<button type="button" onclick="myFunction()">Change paragraph</button>

<script>
function myFunction() {
  document.getElementById("p1").innerHTML = "Paragraph changed.";
}
</script>

</body>
</html>
```

## Example 1

Show date

```
<!DOCTYPE html>
<html>
  <head>
    <title>Example 1</title>
  </head>
  <body>

    <h1>Date operation with JavaScript</h1>

    <button type="button"
onDate() ">
    onclick="document.getElementById('dateshow').innerHTML =
    Display Date and Time.</button>

    <p id="dateshow"></p>

  </body>
</html>
```

Write javascript code that display short date on the screen.

### Example 2

Change image

```
<!DOCTYPE html>
<html>
  <head>
    <title>Example 2</title>
  </head>
  <body>
    <h1>Change Images</h1>

    <p>Click image to change </p>

    <script>
      function changeImage() {
        var image = document.getElementById('myImage');
        if (image.src.match("browser")) {
          image.src = "rss.ico";
        } else {
          image.src = "browser.PNG";
        }
      }
      ....

    </body>
  </html>
```

### Example 3

## Show clock

```
<!--DOCTYPE html>  
<html>  
    <head>  
        <title>Example 3</title>  
        <script type="text/javascript">  
            function startTime() {  
                var today = new Date();  
                var h = today.getHours();  
                var m = today.getMinutes();  
                var s = today.getSeconds();  
  
                m = checkTime(m);  
                s = checkTime(s);  
                document.getElementById('.....').innerHTML = h + ":" + m + ":" + s;  
                t = setTimeout('startTime()', 1000);
```

```

    }
    // add a zero in front of numbers<10
    function checkTime(i) {
        if (i < 10) {
            i = "0" + i;
        }
        return i;
    }
</script>
</head>

<body onload="startTime()">
    <div id="txt"></div>
</body>
</html>

```

## Example 4

Show Clock, javascript code in external file.

### Clock.html

```

<!DOCTYPE html>
<html>
    <head>
        <title>Example 4</title>
        <script type="text/javascript"
src="clockFunction.js"></script>
    </head>

    <body onload="st...">
        <div id="txt"></div>
    </body>
</html>

```

### clockFunction.js

```

function startTime() {
    var today = new Date();
    var h = today.getHours();
    var m = today.getMinutes();
    var s = today.getSeconds();

    m = checkTime(m);
    s = checkTime(s);
    document.getElementById('...').innerHTML = "Clock:" + h + ":" + m
+ ":" + s;
    t = setTimeout('startTime()', 1000);
}

```

```

}
// add a zero in front of numbers<10
function checkTime(i) {
    if (i < 10) {
        i = "0" + i;
    }
    return i;
}

```

## Example 5

Console.html

```

<!DOCTYPE html>
<html>
    <head>
        <title>Example 7</title>
        <script type="text/javascript" src="....."></script>
    </head>

    <body onload="startTime()">
        <div id="txt"></div>
    </body>
</html>

```

functionConsole.js

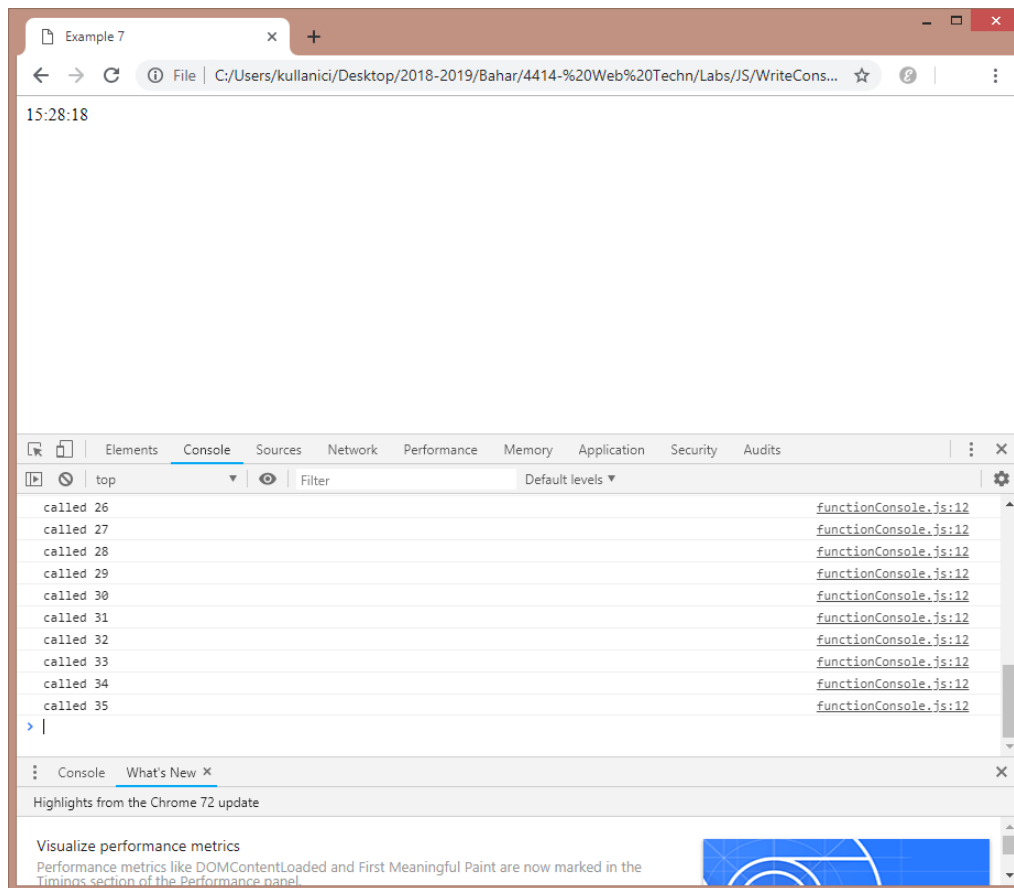
```

var counter = 0;
function startTime() {
    counter++;
    var today = new Date();
    var h = today.getHours();
    var m = today.getMinutes();
    var s = .....

    m = checkTime(m);
    s = checkTime(s);
    document.getElementById('txt').innerHTML = h + ":" + m + ":" + s;
    console.log("called " + counter);
    t = setTimeout('startTime()', 1000);
}

// add a zero in front of numbers<10
function checkTime(i) {
    if (i < 10) {
        i = "0" + i;
    }
    return i;
}

```



Browser settings → More tools → developer tools (chrome)

Browser settings → Web Developer (firefox)

## Example 6

### JS 6 sample

```
<!DOCTYPE html>
<html>
<body>

<h2>The ** Operator</h2>

<p id="p1"></p>

<script>
var x = 5;
document.getElementById("p1")..... = x ** 3;
</script>

</body>
</html>
```

## Example 7

### JS 6 sample

```
<!DOCTYPE html>
<html>
<body>

<h2>Default Parameter Values</h2>

<p id="js6"></p>

<script>
function myFunction(x, y = 1) {
  // y is 1 if not passed or undefined
  return x + y;
}
document.getElementById("js6").innerHTML = myFunction(25);
</script>

</body>
</html>
```