Lab manual 5

JavaScript

Scripts can be added using the <script> tags in the html either in the body or the head. Or they could be added in a separate file and later on be linked in html file.

- **Scripts in head:**

```
1  <html>
2      <head>
3          <script>
4              alert('Welcome to JavaScript');
5          </script>
6      </head>
7
8      <body>
9          Welcome
10     </body>
11
12 </html>
```

- **Scripts in body:**

```
1  <html>
2      <head>
3      </head>
4
5      <body>
6          Welcome
7          <script>
8              alert('Welcome to JavaScript');
9          </script>
10     </body>
11
12 </html>
```

- **Linking external scripts:**

```
1  <script src="/path/to/script.js"></script>
```

```
1  <script src="https://cdnjs.cloudflare.com/ajax/libs/lodash.js/3.2.0/lodash.js"></script>
```

Variables in JS:

```
var x = 5.25;
var person = "Ahmed Mostafa";
var cars = ["Saab", "Volvo", "BMW"]
```

Var, let:

```
var x = 10;
// Here x is 10
{
  var x = 2;
  // Here x is 2
}
// Here x is 2
```

```
var x = 10;
// Here x is 10
{
  let x = 2;
  // Here x is 2
}
// Here x is 10
```

Using Functions

```html
1  <html>
2      <head>
3          <script>
4          function showAlert()
5          {
6              alert('Welcome to JavaScript');
7          }
8          </script>
9      </head>
10
11     <body>
12         Welcome
13         <input type="button" onclick="showAlert()" value="Show Alert">
14     </body>
15
16 </html>
17
```

Changing HTML attributes

```html
1  <html>
2      <head>
3          <script>
4          function change()
5          {
6              document.getElementById('myID').innerHTML="<h1>Hello!</h1>";
7
8          }
9          </script>
10     </head>
11
12     <body>
13         <p id='myID'>Welcome</p>
14         <input type='button' onclick='change()' value='change'>
15     </body>
16
17 </html>
```

Output:

Welcome

change

➡️

Hello!

change

Input Validation
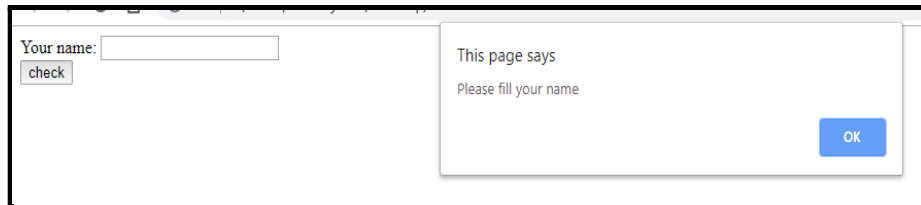
```
1   <html>
2       <head>
3           <script>
4           function check()
5           {
6               var a = document.getElementById('fn').value;
7               if (a == "")
8               {
9               alert('Please fill your name');
10              }
11          }
12          </script>
13      </head>
14
15      <body>
16          Your name:
17          <input id="fn" type="text">
18          <br>
19          <input type="button" onclick='check()' value="check">
20      </body>
21
22  </html>
```

Output:

Your name: [   ]
check

Your name: [   ]
check

This page says

Please fill your name

OK

PHP filter_var() Function

The `filter_var()` function both validates and sanitizes data.

The `filter_var()` function filters a single variable with a specified filter. It takes two pieces of data:

- The variable you want to check
- The type of check to use

```php
<?php
$int = 100;

if (!filter_var($int, FILTER_VALIDATE_INT) === false) {
  echo("Integer is valid");
} else {
  echo("Integer is not valid");
}
?>
```

```php
<?php
$int = web;

if (!filter_var($int, FILTER_SANITIZE_STRING) === false) {
  echo("Integer is valid");
} else {
  echo("Integer is not valid");
}
?>
```

```php
<?php
$int = 0;

if (filter_var($int, FILTER_VALIDATE_INT) === 0 || !filter_var($int,
FILTER_VALIDATE_INT) === false) {
  echo("Integer is valid");
} else {
  echo("Integer is not valid");
}
?>
```

```php
<?php
$ip = "127.0.0.1";

if (!filter_var($ip, FILTER_VALIDATE_IP) === false) {
  echo("$ip is a valid IP address");
} else {
  echo("$ip is not a valid IP address");
}
?>
```

```php
<?php
$email = "john.doe@example.com";

// Remove all illegal characters from email
$email = filter_var($email, FILTER_SANITIZE_EMAIL);

// Validate e-mail
if (!filter_var($email, FILTER_VALIDATE_EMAIL) === false) {
  echo("$email is a valid email address");
} else {
  echo("$email is not a valid email address");
}
?>
```

```php
<?php
$url = "https://www.w3schools.com";

// Remove all illegal characters from a url
$url = filter_var($url, FILTER_SANITIZE_URL);

// Validate url
if (!filter_var($url, FILTER_VALIDATE_URL) === false) {
  echo("$url is a valid URL");
} else {
  echo("$url is not a valid URL");
}
?>
```
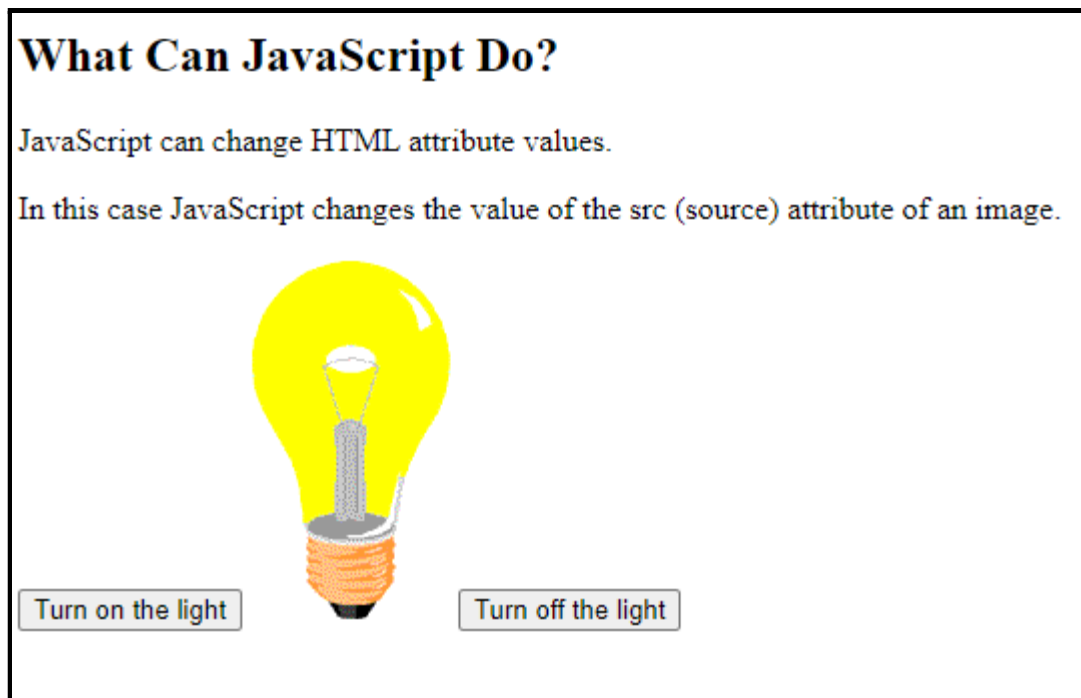
Exercise

1.change image by using javascript

In this example JavaScript changes the value of the `src` (source) attribute of an `<img>` tag

2.website:

The "UserName" and "Password" should be inserted into the database when the user clicks on "submit"and validates input using javascript.
 Validate all forms in
  - Signup
  - Login
  - EditInfo