

Lab 5 –JavaScript programming and DOM

1 Learning Objectives

- To understand basic JS programming skills
- To understand DOM basics

2 JS programming exercises

You need to get help from [w3school.com](https://www.w3schools.com) for 2.1-2.3.

- 2.1 Write a JavaScript program to get the current date with the format of dd-mm-yyyy.
- 2.2 Write a JavaScript program to determine whether a given year is a leap year in the Gregorian calendar.
- 2.3 Write a JavaScript program to calculate days left until next Christmas
- 2.4 Write a JavaScript program to check whether one given integer values are in the range [10, 99] (inclusive). Return true if in the range.
- 2.5 Write a JavaScript program to compute the sum of the two given integers. If the two values are identical, then returns double their sum.
- 2.6 Write a JavaScript program to check two given numbers and return true if one of the number is 10 or if their sum is 10.
- 2.7 Write a JavaScript program to check from one given integer, whether it is positive and divisible by 5.
- 2.8 Write a JavaScript program to mask the first two digits of a given four-digit integer. For example, the given number is 6789, you return xx89.
- 2.9 Write a JavaScript program to create a new string from a given string swapping the position of first and last characters. The string length must be greater than 1. E.g. JavaScript -> tavaScripJ.

3 DOM exercises

Create an empty JavaScript file, `dom.js` for the following exercises.

- 3.1 Here is a sample html file with a submit button. Now change the content of the paragraph text to “I am Mary” through JavaScript code.

```
<!DOCTYPE html>
<html>
<head>
<meta charset='utf-8' />
<title>JS DOM 1</title>
</head>
<body>
<p id='change'> I am John </p>
<button onclick='change()'>Change</button>
```

```

<script src='dom.js'></script>
</body>
</html>

```

3.2 Write a JavaScript program to get the values of First name and Last name of the following form then pop up a welcome message (hint: use alert() function).

```

<!DOCTYPE html>
<html>
<head>
<meta charset='utf-8' />
<title>JS DOM 2</title>
</head>
<body>
<form>
First name: <input type="text" id="fname" ><br>
Last name: <input type="text" id="lname"><br>
<button onclick='register()' >Register</button>
</form>
<script src='dom.js'></script>
</body>
</html>

```

3.3 Write a JavaScript program to show the user input from a dropdown list in an alert window.

```

<!DOCTYPE html>
<html>
<head>
<meta charset='utf-8' />
<title>JS DOM 3</title>
</head>
<body>
<h3>Select your favorite colour: </h3>
<select id="mySelect">
<option value='red'>Red</option>
<option value='green'>Green</option>
<option value='blue'>Blue</option>
<option value='white'>White</option>
</select>
<button onclick='show()' >Choose</button>
<script src='dom.js'></script>
</body>
</html>

```

You need to write three functions in dom.js:

```

function change() {
}

function register() {
}

function show() {
}

```