**After installing node.JS**

* **Install http server**

**Command: npm I http-server –g**

* **Use npx http-server**

**Html is the language of web-content, Css is the language of web-style**

**Javascript is the language that brings both of this together**

**1)**

<!DOCTYPE html>

<html>

<body>

<h2>Redeclaring a Variable Using let</h2>

<p id="demo"></p>

<script>

let x = 10;

// Here x is 10

{

let x = 2;

// Here x is 2

}

// Here x is 10

document.getElementById("demo").innerHTML = x;

</script>

</body>

</html>

**2)**

<!DOCTYPE html>

<html>

<body>

<h2>Declaring a Variable Using const</h2>

<p id="demo"></p>

<script>

var x = 10;

// Here x is 10

{

const x = 2;

// Here x is 2

}

// Here x is 10

document.getElementById("demo").innerHTML = x;

</script>

</body>

</html>

**3)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Arrow Functions</h2>

<p>With arrow functions, you don't have to type the function keyword, the return keyword, and the curly brackets.</p>

<p>Arrow functions are not supported in IE11 or earlier.</p>

<p id="demo"></p>

<script>

const x = (x, y) => x \* y;

document.getElementById("demo").innerHTML = x(5, 5);

</script>

</body>

</html>

**4)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Arrow Functions</h2>

<p>Arrow functions are not supported in IE11 or earlier.</p>

<p id="demo"></p>

<script>

const x = (x, y) => { return x \* y };

document.getElementById("demo").innerHTML = x(5, 5);

</script>

</body>

</html>

**5)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript For Of Loop</h2>

<p>The for of statement loops through the values of any iterable object:</p>

<p id="demo"></p>

<script>

const cars = ["BMW", "Volvo", "Mini"];

let text = "";

for (let x of cars) {

text += x + "<br>";

}

document.getElementById("demo").innerHTML = text;

</script>

</body>

</html>

**6)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Map Objects</h2>

<p>Objects as keys in a Map:</p>

<p id="demo"></p>

<script>

// Create Objects

const apples = {name: 'Apples'};

const bananas = {name: 'Bananas'};

const oranges = {name: 'Oranges'};

// Create a new Map

const fruits = new Map();

// Add the Objects to the Map

fruits.set(apples, 500);

fruits.set(bananas, 300);

fruits.set(oranges, 200);

// Display Object Type

document.getElementById("demo").innerHTML = fruits;

</script>

</body>

</html>

**7)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Sets</h2>

<p>Add values to a Set:</p>

<p id="demo"></p>

<script>

// Create a Set

const letters = new Set();

// Add Values to the Set

letters.add("a");

letters.add("b");

letters.add("c");

// Display set.size

document.getElementById("demo").innerHTML = letters.size;

</script>

</body>

</html>

**8)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Class</h2>

<p>How to use a JavaScript Class.</p>

<p id="demo"></p>

<script>

class Car {

constructor(name, year) {

this.name = name;

this.year = year;

}

}

const myCar = new Car("Ford", 2014);

document.getElementById("demo").innerHTML =

myCar.name + " " + myCar.year;

</script>

</body>

</html>

**9)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Promise</h2>

<p>Wait 3 seconds (3000 milliseconds) for this page to change.</p>

<h1 id="demo"></h1>

<script>

const myPromise = new Promise(function(myResolve, myReject) {

setTimeout(function(){ myResolve("I love You !!"); }, 3000);

});

myPromise.then(function(value) {

document.getElementById("demo").innerHTML = value;

});

</script>

</body>

</html>

**10)**

<!DOCTYPE html>

<html>

<body>

<h2>Using JavaScript Symbol()</h2>

<p id="demo"></p>

<script>

const person = {

firstName: "John",

lastName: "Doe",

age: 50,

eyeColor: "blue"

};

let id = Symbol('id');

person[id] = 140353;

document.getElementById("demo").innerHTML = person[id] + " " + person.id;

</script>

</body>

</html>

**11)**

<!DOCTYPE html>

<html>

<body>

<h2>Default Parameter Values</h2>

<p id="demo"></p>

<script>

function myFunction(x, y = 10) {

// y is 10 if not passed or undefined

return x + y;

}

document.getElementById("demo").innerHTML = myFunction(5);

</script>

</body>

</html>

**12)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Function Rest Parameter</h2>

<p>The rest parameter (...) allows a function to treat an indefinite number of arguments as an array:</p>

<p id="demo"></p>

<script>

function sum(...args) {

let sum = 0;

for (let arg of args) sum += arg;

return sum;

}

let x = sum(4, 9, 16, 25, 29, 100, 66, 77);

document.getElementById("demo").innerHTML = x;

</script>

</body>

</html>

**13)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Arrays</h2>

<p>The Array.from() method returns an Array object from any object with a length property or any iterable object.</p>

<p id="demo"></p>

<script>

const myArr = Array.from("ABCDEFG");

document.getElementById("demo").innerHTML = myArr;

</script>

<p>The Array.from() method is not supported in Internet Explorer.</p>

</body>

</html>

**14)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Array.findIndex()</h2>

<p id="demo"></p>

<script>

const numbers = [4, 9, 16, 25, 29];

document.getElementById("demo").innerHTML = "First number over 18 has index " + numbers.findIndex(myFunction);

function myFunction(value, index, array) {

return value > 18;

}

</script>

</body>

</html>

**15)**

<!DOCTYPE html>

<html>

<body>

<h2>JavaScript Number Methods</h2>

<p>The isFinite() method returns false if the argument is Infinity or NaN.</p>

<p>Otherwise it returns true.</p>

<p id="demo"></p>

<script>

document.getElementById("demo").innerHTML =

isFinite(10 / 0) + "<br>" + isFinite(10 / 1);

</script>

</body>

</html>

**BOOTSTRAP PROGRAMS BELOW:::::::::::::::**

**1)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container-fluid">

<h1>My First Bootstrap Page</h1>

<p>This part is inside a .container-fluid class.</p>

<p>The .container-fluid class provides a full width container, spanning the entire width of the viewport.</p>

</div>

</body>

</html>

**2)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container-fluid">

<h1>Hello World!</h1>

<p>Resize the browser window to see the effect.</p>

<p>The columns will automatically stack on top of each other when the screen is less than 768px wide.</p>

<div class="row">

<div class="col-sm-4" style="background-color:lavender;">.col-sm-4</div>

<div class="col-sm-8" style="background-color:lavenderblush;">.col-sm-8</div>

</div>

</div>

</body>

</html>

**3)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container">

<h2>Button Tags</h2>

<a href="#" class="btn btn-info" role="button">Link Button</a>

<button type="button" class="btn btn-info">Button</button>

<input type="button" class="btn btn-info" value="Input Button">

<input type="submit" class="btn btn-info" value="Submit Button">

</div>

</body>

</html>

**4)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="jumbotron">

<h1>Bootstrap Tutorial</h1>

<p>Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile-first projects on the web.</p>

</div>

<div class="container">

<p>This is some text.</p>

<p>This is another text.</p>

</div>

</body>

</html>

**5)**

<!DOCTYPE html>

<html>

<head>

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container">

<h2>Dropdowns</h2>

<p>The .divider class is used to separate links inside the dropdown menu with a thin horizontal line:</p>

<div class="dropdown">

<button class="btn btn-default dropdown-toggle" type="button" data-toggle="dropdown">Tutorials

<span class="caret"></span></button>

<ul class="dropdown-menu">

<li><a href="#">HTML</a></li>

<li><a href="#">CSS</a></li>

<li><a href="#">JavaScript</a></li>

<li class="divider"></li>

<li><a href="#">About Us</a></li>

</ul>

</div>

</div>

</body>

</html>

**6)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container">

<h2>Vertical (basic) form</h2>

<form action="/action\_page.php">

<div class="form-group">

<label for="email">Email:</label>

<input type="email" class="form-control" id="email" placeholder="Enter email" name="email">

</div>

<div class="form-group">

<label for="pwd">Password:</label>

<input type="password" class="form-control" id="pwd" placeholder="Enter password" name="pwd">

</div>

<div class="checkbox">

<label><input type="checkbox" name="remember"> Remember me</label>

</div>

<button type="submit" class="btn btn-default">Submit</button>

</form>

</div>

</body>

</html>

**7)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container-fluid">

<h1>Small Grid</h1>

<p>The following example will result in a 25%/75% split on small, medium and large devices. On extra small devices, it will stack (100% width).</p>

<p>Resize the browser window to see the effect.</p>

<div class="row">

<div class="col-sm-3" style="background-color:yellow;">

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.<br>

Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

</div>

<div class="col-sm-9" style="background-color:pink;">

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo.

</div>

</div>

</div>

</body>

</html>

**8)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container">

<h2>Hover Rows</h2>

<p>The .table-hover class enables a hover state on table rows:</p>

<table class="table table-hover">

<thead>

<tr>

<th>Firstname</th>

<th>Lastname</th>

<th>Email</th>

</tr>

</thead>

<tbody>

<tr>

<td>John</td>

<td>Doe</td>

<td>john@example.com</td>

</tr>

<tr>

<td>Mary</td>

<td>Moe</td>

<td>mary@example.com</td>

</tr>

<tr>

<td>July</td>

<td>Dooley</td>

<td>july@example.com</td>

</tr>

</tbody>

</table>

</div>

</body>

</html>

More examples:

let symbol1 = Symbol.for('foo')

let symbol2 = Symbol.for('foo')

symbol1 === symbol2 // true

|  |
| --- |
| class Password { |
|  | constructor(pwdStr) { |
|  | this[PWD] = hashCode(pwdStr) |
|  | } |
|  |  |
|  | [Symbol.match](pwdStr) { |
|  | return this[PWD] === hashCode(pwdStr) |
|  | } |
|  | } |
|  |  |
|  | let securePassword = new Password('password') |
|  |  |
|  | 'password'.match(securePassword) // true |
|  | 'notmypassword'.match(securePassword) // false |

|  |
| --- |
| const SECRET = Symbol('secret') |
|  | let data = { } |
|  | data[SECRET] = 10 |
|  | let newData = Object.assign({ }, data) |
|  |  |
|  | Object.getOwnPropertyNames(data) // [] |
|  | (SECRET in data) // true |
|  | (SECRET in newData) // true |

**Promise Example:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta http-equiv="X-UA-Compatible" content="ie=edge">

<title>Document</title>

</head>

<body>

<script>

const PromiseP = () =>{

return new Promise((resolve,reject)=>{

resolve("Hello Promoise P");

});

}

const PromiseQ = () =>{

return new Promise((resolve,reject)=>{

resolve("Hello Promise Q");

});

}

const PromiseR = () =>{

return new Promise((resolve,reject)=>{

resolve("Hello Promise R");

});

}

PromiseP().then((P)=>{

console.log(P);

return PromiseQ();

}).then((Q)=>{

console.log(Q);

return PromiseR();

}).then((R)=>{

console.log(R);

});

</script>

</body>

</html>

**Boostrap JS examples**

**9)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container">

<h2>Close Alerts Via JavaScript</h2>

<div class="alert alert-success alert-dismissible" id="myAlert">

<button type="button" class="close">&times;</button>

<strong>Success!</strong> This alert box could indicate a successful or positive action.

</div>

</div>

<script>

$(document).ready(function(){

$(".close").click(function(){

$("#myAlert").alert("close");

});

});

</script>

</body>

</html>

**10)**

<!DOCTYPE html>

<html>

<head>

<title>Bootstrap Example</title>

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container mt-3">

<h2>Dropdown Events</h2>

<p>Click on the Dropdown button below. <strong>event.relatedTarget</strong> returns the element which triggered the dropdown.</p> <div class="dropdown">

<button type="button" class="btn btn-primary dropdown-toggle" data-toggle="dropdown">

Dropdown button

</button>

<div class="dropdown-menu">

<a class="dropdown-item" href="#">Link 1</a>

<a class="dropdown-item" href="#">Link 2</a>

<a class="dropdown-item" href="#">Link 3</a>

</div>

</div>

</div>

<script>

$(document).ready(function(){

$(".dropdown").on("show.bs.dropdown", function(event){

var x = $(event.relatedTarget).text(); // Get the button text

alert("You clicked on: " + x);

});

});

</script>

</body>

</html>

**11)**

<!DOCTYPE html>

<html lang="en">

<head>

<title>Bootstrap Example</title>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js"></script>

<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js"></script>

</head>

<body>

<div class="container mt-3">

<h2>Toggleable Tabs</h2>

<br>

<!-- Nav tabs -->

<ul class="nav nav-tabs">

<li class="nav-item">

<a class="nav-link active" data-toggle="tab" href="#home">Home</a>

</li>

<li class="nav-item">

<a class="nav-link" data-toggle="tab" href="#menu1">Menu 1</a>

</li>

<li class="nav-item">

<a class="nav-link" data-toggle="tab" href="#menu2">Menu 2</a>

</li>

</ul>

<!-- Tab panes -->

<div class="tab-content">

<div id="home" class="container tab-pane active"><br>

<h3>HOME</h3>

<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.</p>

</div>

<div id="menu1" class="container tab-pane fade"><br>

<h3>Menu 1</h3>

<p>Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.</p>

</div>

<div id="menu2" class="container tab-pane fade"><br>

<h3>Menu 2</h3>

<p>Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam.</p>

</div>

</div>

</div>

</body>

</html>