

Course Name : Web Technologies



Course Instructor :

J.Dhiviya Rose

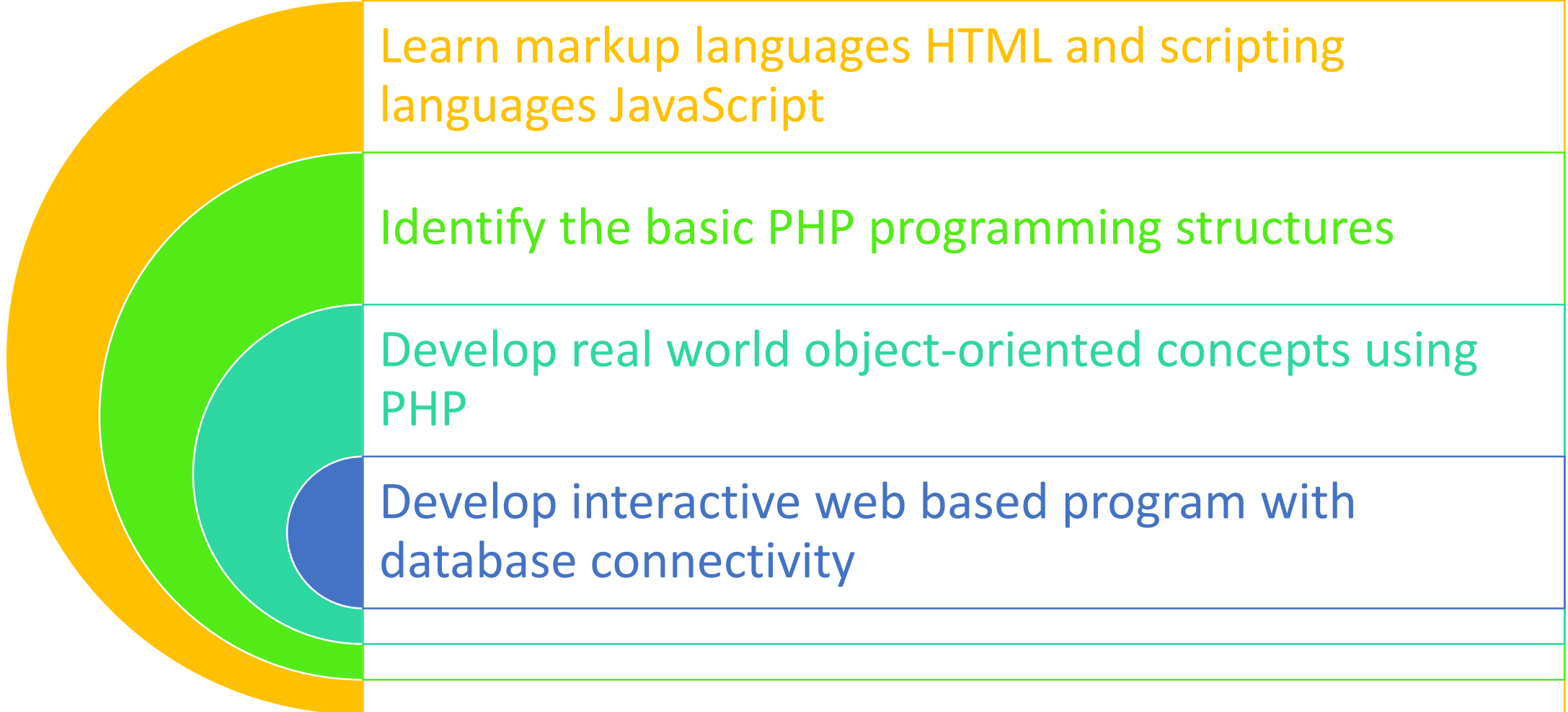
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Course Outcomes – Web Technologies



More on JavaScript

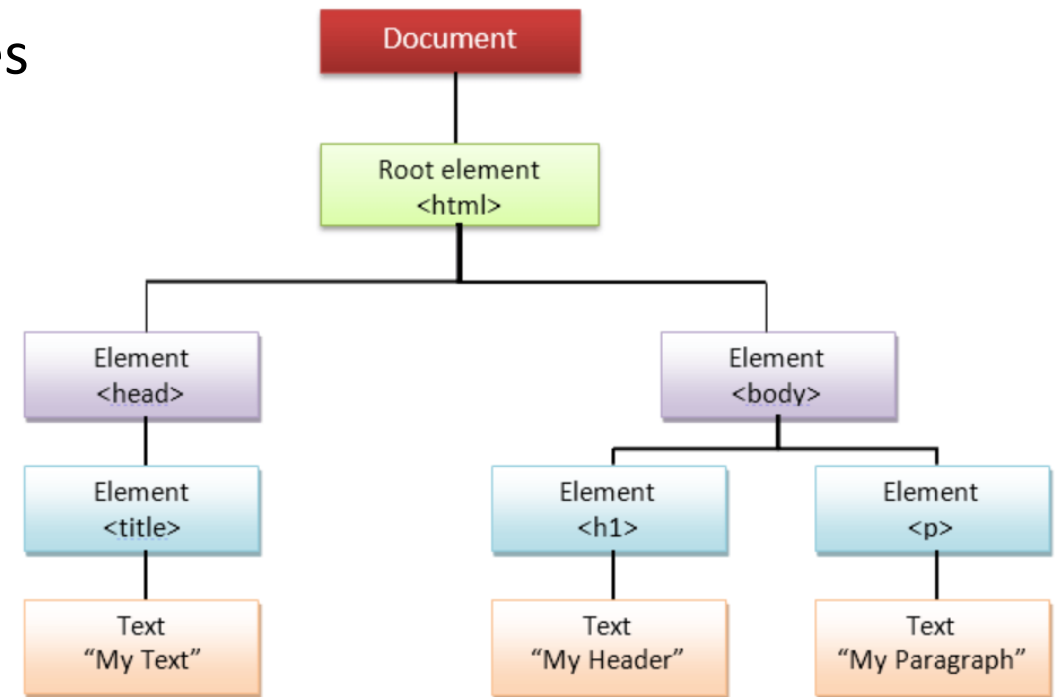
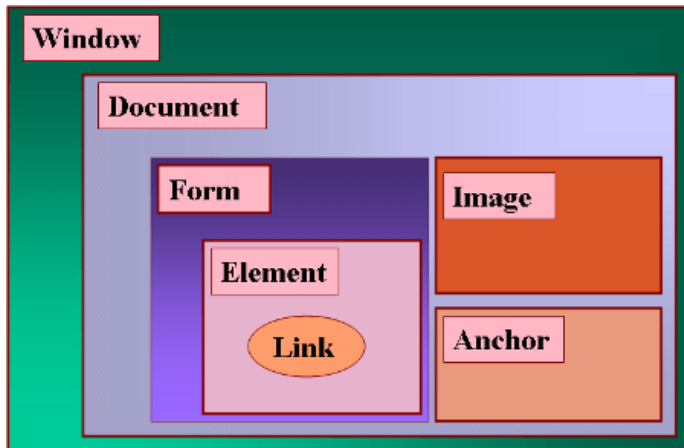
Course Instructor

Dhiviya Rose J . Asst. Prof. Selection Grade

Department of Cybernetics | SOCS | UPES

JavaScript DOM

- Document Object Model
- Web browser creates a DOM of the webpage when the page is loaded.
- Using DOM, JavaScript can
 - create new elements and attributes
 - change the existing elements and attributes
 - remove existing elements and attributes.



Using JavaScript DOM

- **getElementById**
 - To access elements and attributes whose id is set.
- **innerHTML**
 - To access the content of an element.

```
Document Obejct Model
Document Obejct ModelWelcome

File Edit Selection View Go Run ... ← → Search

<> JavaScriptDOM.html ●
C: > Users > dhiviyarj > Desktop > Web Technology Through PHP > Class Activity > <> JavaScriptDOM.html > ↵
1 <!-- DOM Demo -- Created By @Dhiviya -->
2 <html>
3   <body>
4     <p id="p1"> Document Obejct Model</p>
5     <script type="text/javascript">
6       var data1=document.getElementById("p1").innerHTML+"Welcome"
7       document.write(data1)
8     </script>
9   </body>
10  </html>
```

Types of variables in JavaScript



```
var title = 'Code Life';
```

```
let publisher = 'House of Books';
```

```
const author = 'Melvin Gray';
```

The main difference between `var` and `let` is the power of `scope`. Here is an example of seeing them both in action.

```
var x = 'global';  
let y = 'global';  
  
console.log(this.x); // "global"  
console.log(this.y); // undefined
```

<https://dev.to/cleveroscar/javascript-variable-assignments-1275>

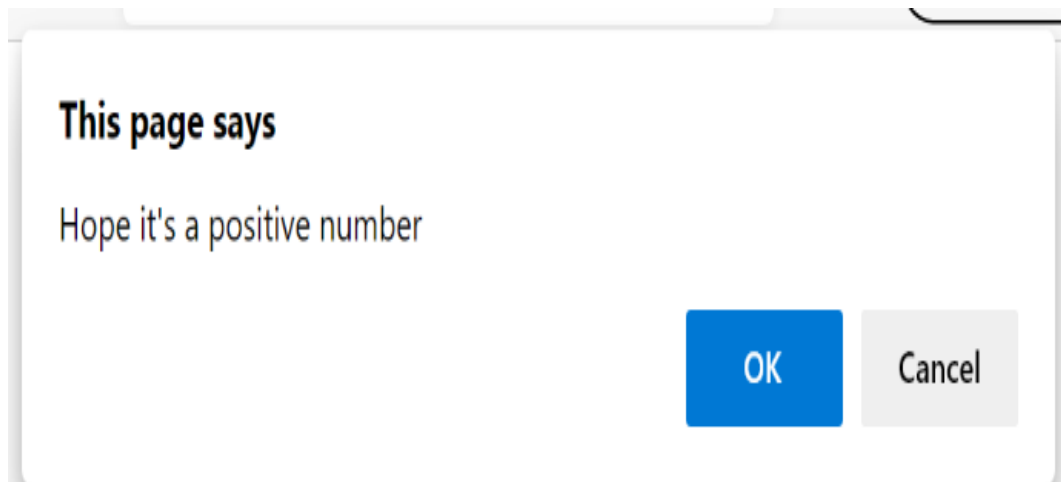


NAMING CONVENTIONS	APPLICATION	EXAMPLES
Lower Camel Case	variables and methods	firstName timeToFirstLoad indexNumber
Upper Camel Case	classes, interfaces, annotations, enums, records	TomcatServer RestController WriteOperation
Screaming Snake Case	constants	INTEREST_RATE MINIMUM_SALARY EXTRA_SAUCE
lower dot case	packages and property files	java.net.http java.management.rmi application.properties
kebab case	not recommended	landing-page.html game-results.jsp 404-error-page.jsf

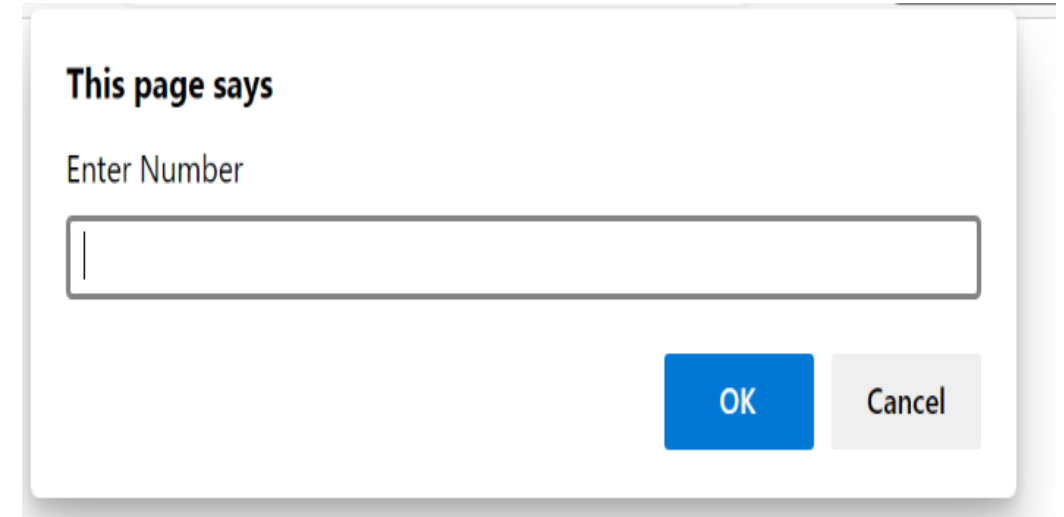
Messages and Confirmation

JavaScript provides 3 built-in window types

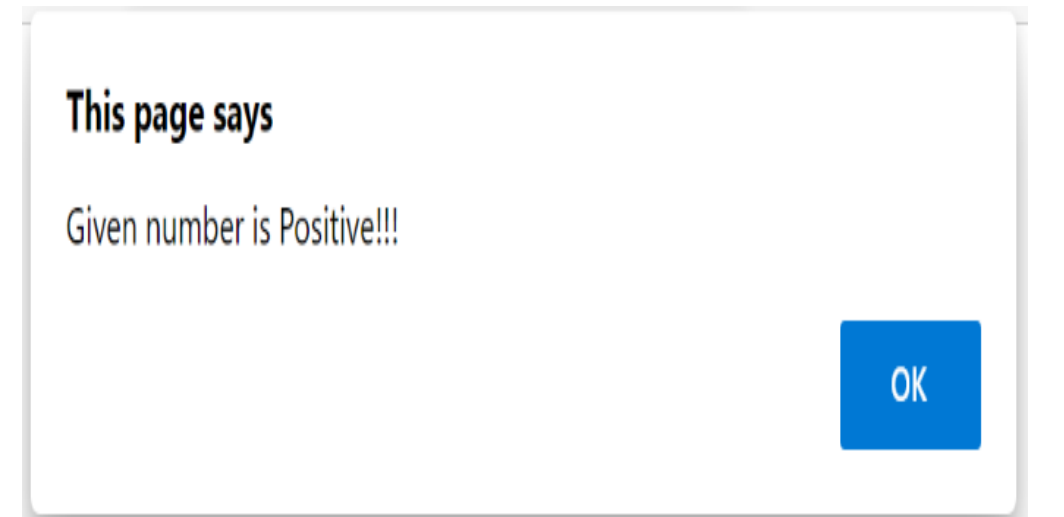
1. `prompt("Enter Number");`
2. `confirm("Hope it's a positive number");`
3. `alert("Given number is Positive!!!");`



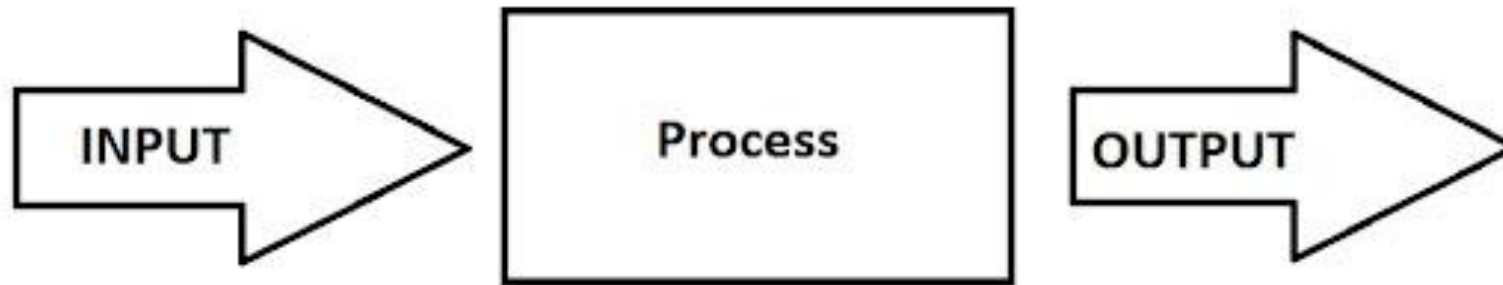
This dialog box is titled "This page says" and contains the text "Hope it's a positive number". It features two buttons at the bottom: a blue "OK" button and a grey "Cancel" button.



This dialog box is titled "This page says" and contains the text "Enter Number". It features a text input field and two buttons at the bottom: a blue "OK" button and a grey "Cancel" button.



This dialog box is titled "This page says" and contains the text "Given number is Positive!!!". It features a single blue "OK" button at the bottom.



I-P-O Cycle

- Form Controls
- Message Boxes
- User activity on the screen like mouse over text controlled by event listeners

Adding Event Listeners

```
<body>
  <p id="p1"> Paragraph 1</p>
  <p id="p2"> Paragraph 2</p>
  <script type="text/javascript">
    var data1=document.getElementById("p1").innerHTML;
    document.write(data1)
    var data2=document.getElementsByTagName("p").innerHTML
    document.write(data2)
  </script>
  <hr>
```

Paragraph 1
Paragraph 2
Paragraph 1Welcome

Click Me!!

This page says

You clicked me!!!

OK

```
<input type="button" id="btnClick" value="Click Me!!" />
<script type="text/javascript">
  document.getElementById("btnClick").addEventListener("click", clicked);
  function clicked()
  {
    alert("You clicked me!!!");
  }
</script>
```

```
</body>
```

Events Performed on an Element

Event	Description
<u>onclick</u>	The event occurs when the user clicks on an element
<u>oncontextmenu</u>	The event occurs when the user right-clicks on an element to open a context menu
<u>ondblclick</u>	The event occurs when the user double-clicks on an element
<u>onmousedown</u>	The event occurs when the user presses a mouse button over an element
<u>onmouseenter</u>	The event occurs when the pointer is moved onto an element
<u>onmouseleave</u>	The event occurs when the pointer is moved out of an element
<u>onmousemove</u>	The event occurs when the pointer is moving while it is over an element
<u>onmouseover</u>	The event occurs when the pointer is moved onto an element, or onto one of its children
<u>onmouseout</u>	The event occurs when a user moves the mouse pointer out of an element, or out of one of its children
<u>onmouseup</u>	The event occurs when a user releases a mouse button over an element



Tutorials ▾

Exercises ▾

HTML

CSS

JAVASCRIPT

SQL

JS Where To

JS Output

JS Statements

JS Syntax

JS Comments

JS Variables

JS Let

JS Const

JS Operators

JS Arithmetic

JS Assignment

JS Data Types

JS Functions

JS Objects

JS Events

Te

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Th

ACTIVITY TIME



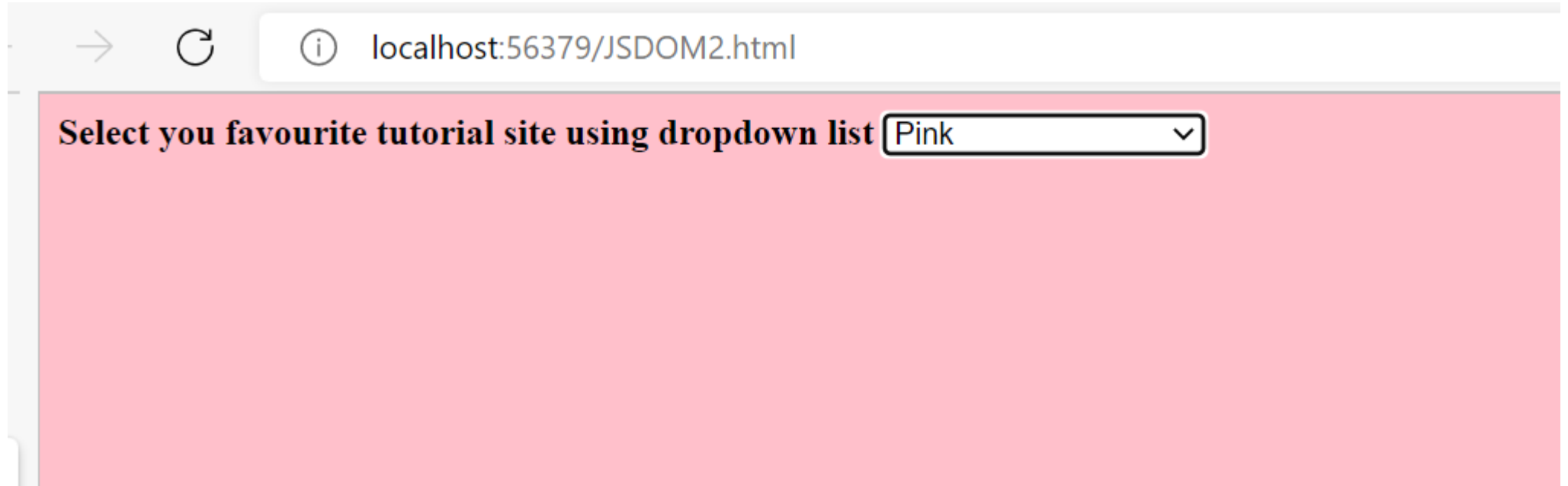
- Create a textbox which get the name
- On clicking a button a message box should come
- “Welcome <name>

ACTIVITY TIME



- Refer

<https://www.javatpoint.com/how-to-create-dropdown-list-using-javascript>



```

<html>
<head>
  <title>dropdown menu using select tab</title>

  <script type="text/javascript">
    function func1() {
      var cs = document.getElementById("myList").value
      //console.log(cs)
      document.body.style.backgroundColor=cs
    }
  </script>
</head>

<body>
  <form>
    <b> Select you favourite tutorial site using dropdown list </b>
    <select id="myList" onchange="func1()">
      <option> ---Choose tutorial--- </option>
      <option> Blue </option>
      <option> Pink </option>
      <option> Yellow </option>
    </select>

  </form>
</body>
</html>

```

→ ↻ ⓘ localhost:56379/JSDOM2.html

Select you favourite tutorial site using dropdown list

Pink


Roll Over Buttons

file1.html

← → ↻ ⓘ File | C:/Users/dhiviyarj/Desktop/Web%20Technology/Class

Now the Mouse Pointer is Out of the TextArea box

Move the mouse over this text to change its color to red.
Move the mouse away to change the text color to blue.



Keep the mouse over the text to see the places to Visit in Dehradun

- DehradunZoo
- RobberCave
- ClockTower

file1 - Notepad

File Edit Format View Help

```
<HTML>
<head></head>
<body>

<hr><hr><hr>

<textarea rows="2" cols="50" name="b1"
onmouseover="this.value='Now the Mouse Pointer is Above the TextArea'"
onmouseout="this.value='Now the Mouse Pointer is Out of the TextArea
box'">

</textarea>

<hr><hr><hr>

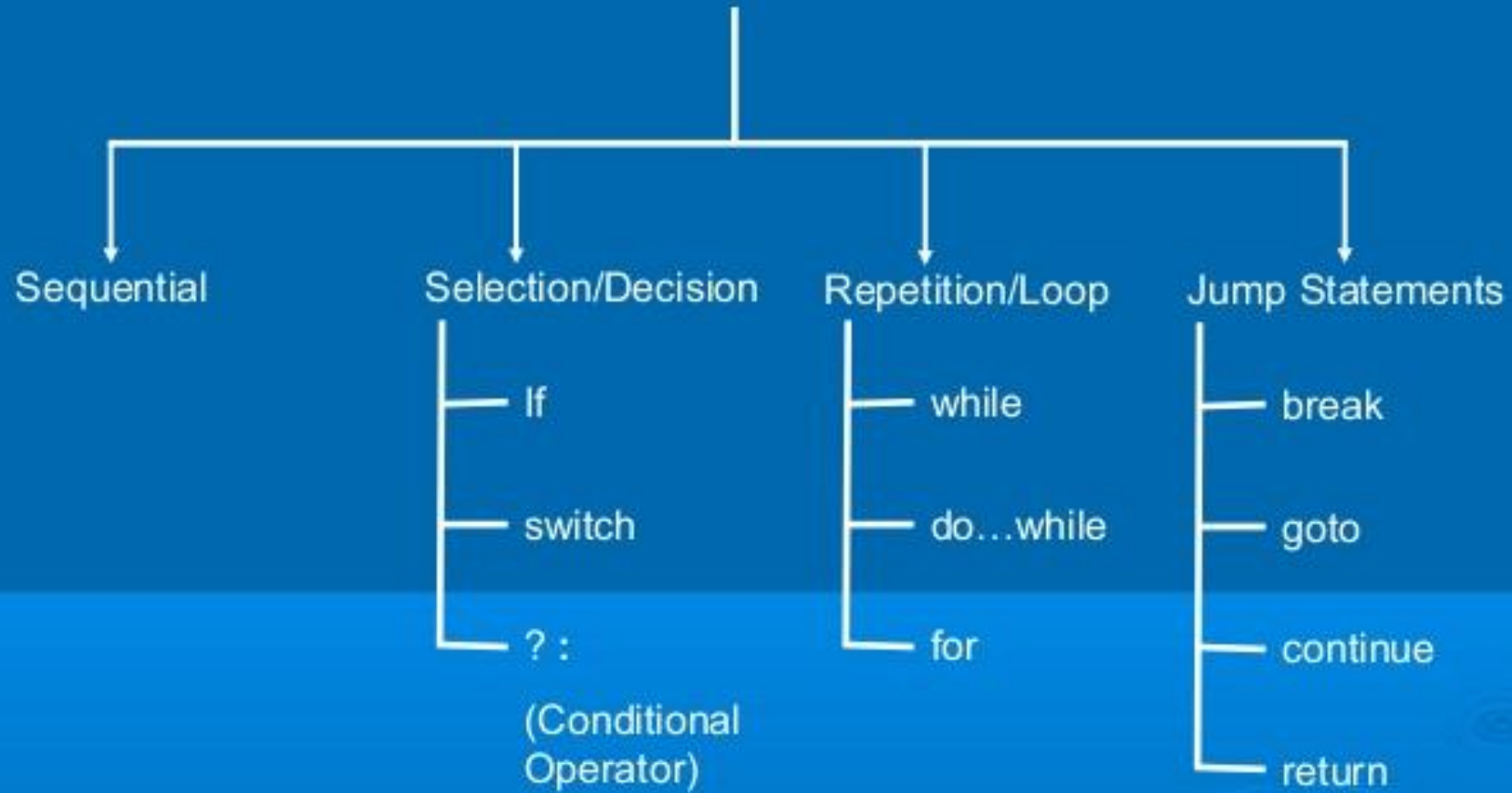
<p onmouseover="this.style.color='red'" onmouseout="this.style.color='blue'">
Move the mouse over this text to change its color to red. <br>
Move the mouse away to change the text color to blue.
</p>

<hr><hr><hr>


<h3 onmouseover="document.book.src='RobbersCave.png'">
Keep the mouse over the text to see the places to Visit in Dehradun</h3>
<ul>
<li onmouseover="document.book.src='DehradunZoo.png'">DehradunZoo
<li onmouseover="document.book.src='RobberCave.png'">RobberCave
<li onmouseover="document.book.src='clocktower.png'">ClockTower
</ul>

</body>
</html>
```


Control flow structures.



Conditional/Decision/Selection Control Statements

```
<script>
var a=20;
if(a>10){
document.write("value of a is greater than 10");
}
</script>
```

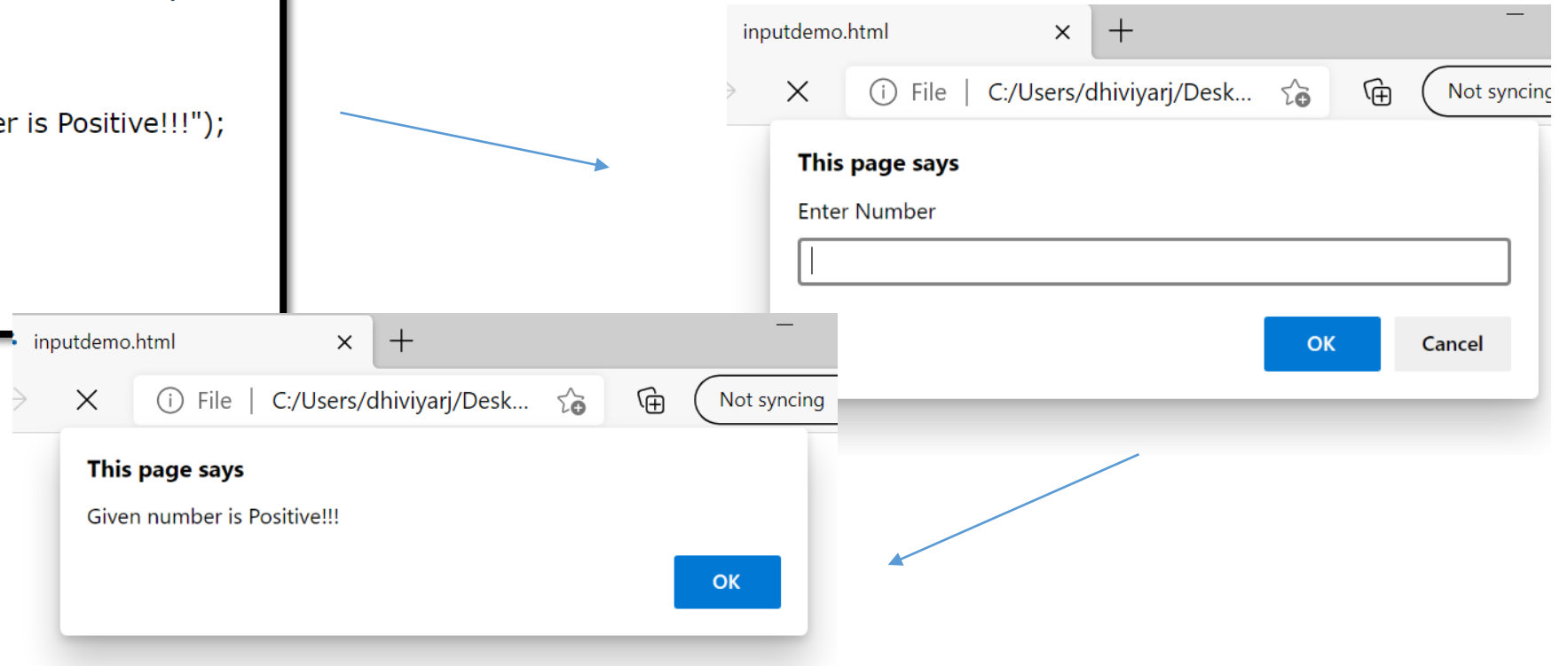
```
<script>
var a=20;
if(a%2==0){
document.write("a is even number");
}
else{
document.write("a is odd number");
}
</script>
```

```
<script>
var a=20;
if(a==10){
document.write("a is equal to 10");
}
else if(a==15){
document.write("a is equal to 15");
}
else if(a==20){
document.write("a is equal to 20");
}
else{
document.write("a is not equal to 10, 15 or 20");
}
</script>
```

IF statement

```
<html>
  <body>
    <script type="text/javascript">
      var num = prompt("Enter Number");
      if (num > 0)
      {
        alert("Given number is Positive!!!");
      }
    </script>
  </body>
</html>
```

prompt("Text") - displays a dialog box that prompts the visitor for input.



Operators in JavaScript

Arithmetic Operators

Operator	Description	Example
+	Addition	10+20 = 30
-	Subtraction	20-10 = 10
*	Multiplication	10*20 = 200
/	Division	20/10 = 2
%	Modulus (Remainder)	20%10 = 0
++	Increment	var a=10; a++; Now a = 11
--	Decrement	var a=10; a--; Now a = 9

Logical Operators

Operator	Description	Example
&&	Logical AND	(10==20 && 20==33) = false
	Logical OR	(10==20 20==33) = false
!	Logical Not	!(10==20) = true

... & many more!

Comparison Operators

Operator	Description	Example
==	Is equal to	10==20 = false
===	Identical (equal and of same type)	10===20 = false
!=	Not equal to	10!=20 = true
!==	Not Identical	20!==20 = false
>	Greater than	20>10 = true
>=	Greater than or equal to	20>=10 = true
<	Less than	20<10 = false
<=	Less than or equal to	20<=10 = false

Usage of Timer

```
<html>
<body>
<script>
function delayFunction() {
    //display the message on web after 3 seconds on calling delayFunction
    document.write('<h3> Welcome to JavaTpoint <h3>');
}
</script>
<h4> Example of delay the execution of function <h4>

<!--button for calling of user-defined delayFunction having 3 seconds of delay -->
<button onclick = "setTimeout(delayFunction, 3000)"> Click Here </button>

</body>
</html>
```

*Thank
you*

