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| Division: 5 | Batch: P5 |

Practical No: 1 Write a JavaScript program to calculate area of triangle, area of rectangle and area of circle.

Code:

**Index.html**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

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

<script src="script.js"></script>

<title>Exp 1</title>

</head>

<body>

<h2>Area Calculator</h2>

<br><br>

<div style="float: left; width: 450px;">

<h3>Triangle (Heron's Formula)</h3>

<label>Side 1</label>

<input type="number" id="side1" >

<br><br>

<label>Side 2</label>

<input type="number" id="side2" >

<br><br>

<label>Side 3</label>

<input type="number" id="side3" >

<br><br>

<button onclick="triangle()">Calculate</button>

<p>Area of Triangle = <span id="triangle"></span></p>

</div>

<div style="float: right; width: 240px;">

<h3>Circle</h3>

<label>Radius</label>

<input type="number" id="radius" size="15" onfocus="this.value=''">

<br><br>

<button onclick="circle()">Calculate</button>

<p>Area of Circle = <span id="circle"></span></p>

<br><br>

</div>

<div style="float: right; width: 550px;">

<h3>Rectangle</h3>

<label for="Length">Length</label>

<input type="number" id="length" size="15" onfocus="this.value=''">

<br><br>

<label for="width">Width</label>

<input type="number" id="width" size="15" onfocus="this.value=''">

<br><br>

<button onclick="rectangle()">Calculate</button>

<p>Area of Rectangle = <span id="rectangle"></span></p>

<br><br>

</div>

</body>

</html>

**Script.js**

function triangle()

{

var s1 = parseFloat(document.getElementById("side1").value);

var s2 = parseFloat(document.getElementById("side2").value);

var s3 = parseFloat(document.getElementById("side3").value);

var sum = (s1+s2+s3)/2;

var area = Math.sqrt(sum\*((sum-s1)\*(sum-s2)\*(sum-s3)));

if (s1>0 && s2> 0 && s3>0){

if(s1+s2 > s3 && s1+s3>s2 && s2+s3>s1){

if (area > 0){

document.getElementById("triangle").innerHTML = area.toFixed(2);

}else{

document.getElementById("triangle").innerHTML = "Invalid Input";

}

}

else{

document.getElementById("triangle").innerHTML = "Sides of triangle are invalid";

}

}

else{

document.getElementById("triangle").innerHTML = "Invalid Input";

}

}

function rectangle()

{

var s1 = parseFloat(document.getElementById("length").value);

var s2 = parseFloat(document.getElementById("width").value);

if(s1 >0 && s2 >0){

var area = s1\*s2;

document.getElementById("rectangle").innerHTML = area.toFixed(2);

}

else{

document.getElementById("rectangle").innerHTML = "Invalid Input";

}

}

function circle()

{

var r = parseFloat(document.getElementById("radius").value);

if(r > 0){

var area = (22/7)\*r\*r;

document.getElementById("circle").innerHTML = area.toFixed(2);

}else{

document.getElementById("circle").innerHTML = "Invalid Input";

}

}

window.onload = function() {

document.getElementById('side1').value = '';

document.getElementById('side2').value = '';

document.getElementById('side3').value = '';

document.getElementById('length').value = '';

document.getElementById('width').value = '';

document.getElementById('radius').value = '';

}

Output:

