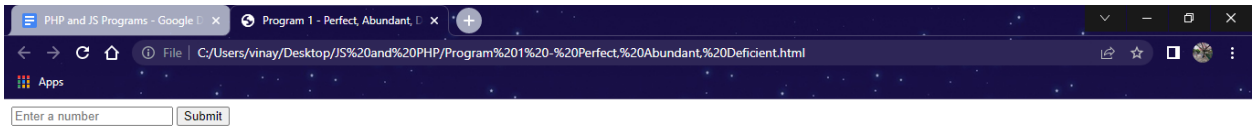
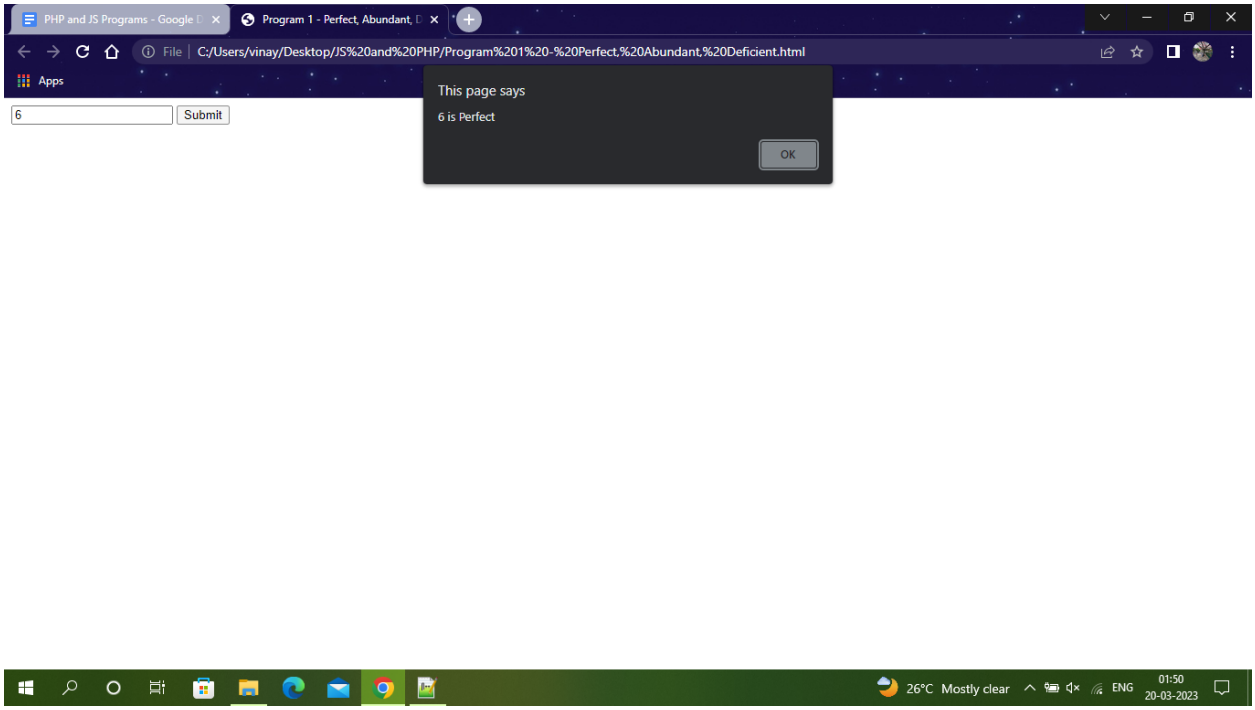
1. Write a JavaScript program to check whether a given number is perfect, abundant or deficient. Use an alert box to display the output.

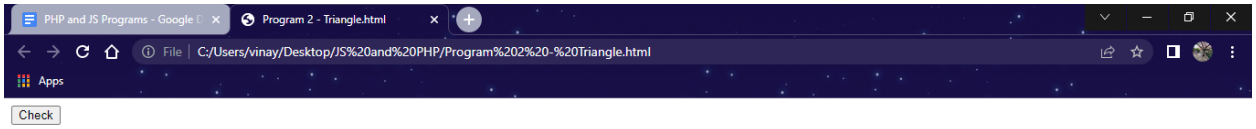



```
<html>
	<head>
		<script>
			function fun()
			{
				var i,sum=0,n;
				n=parseInt(document.getElementById("number").value);
				for(i=1;i<=(n/2);i++)
					if(n%i==0)
						sum=sum+i;
				if(sum==n)
					alert(n+" is Perfect");
				else if(sum<n)
					alert(n+" is Deficient");
				else
					alert(n+" is abundant");
			}
		</script>
	</head>
	<body>
		<input type="text" placeholder="Enter a number" id="number">
		<input type="submit" value="Submit" onClick="fun()">
	</body>
</html>
```


PHP and JS Programs - Google
Program 1 - Perfect, Abundant,
File | C:/Users/vinay/Desktop/JS%20and%20PHP/Program%201%20-%20Perfect,%20Abundant,%20Deficient.html
Apps
6
Submit
This page says
6 is Perfect
OK

26°C Mostly clear
ENG
01:50
20-03-2023

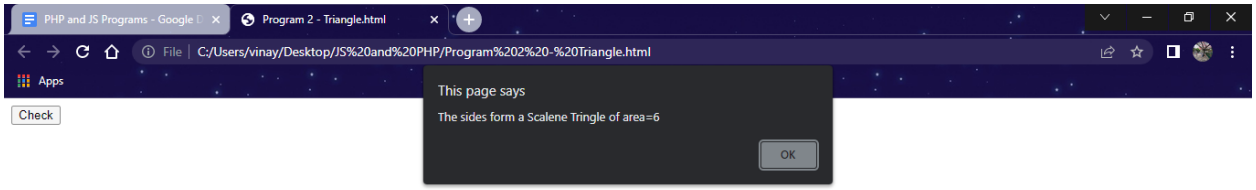
2. Write a JavaScript program to check whether the given sides can form a triangle. If yes, find the type (isosceles, equilateral and scalene) and area of the triangle. Use prompt dialogue box to accept the sides.



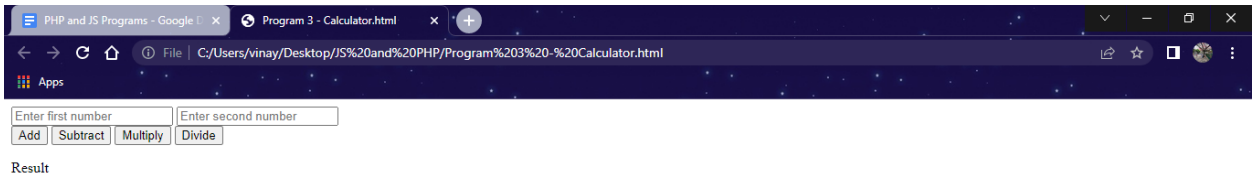

```
<html>
	<head>
		<script>
			function fun()
			{
				var s1,s2,s3,area,s;
				s1=parseInt(prompt("Enter Side 1:"));
				s2=parseInt(prompt("Enter Side 2:"));
				s3=parseInt(prompt("Enter Side 3:"));
				if(s1+s2<s3||s1+s3<s2||s2+s3<s1)
					alert("The sides cannot form a triangle.");
				else
				{
					s=(s1+s2+s3)/2;
					area=Math.sqrt(s*(s-s1)*(s-s2)*(s-s3));
					if(s1==s2&&s2==s3)
						alert("The sides form an Equilateral Tringle of area
="+area);
					else if(s1==s2||s2==s3||s1==s3)
						alert("The sides form an Isosceles Tringle of
area="+area);
					else
```

```
                                        alert("The sides form a Scalene Tringle of
area="+area);
                                }
                        }
                </script>
        </head>
        <body>

                <input type="submit" value="Check" onClick="fun()">
        </body>
</html>
```

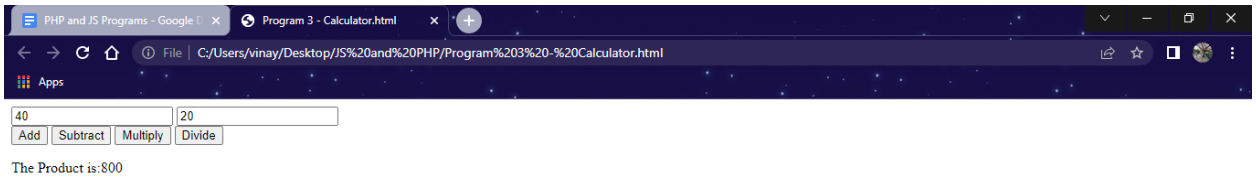


3. Design a form that accepts two integers. Provide 4 buttons for Add, Subtract, Multiply, Divide. Add JavaScript program to add, subtract, multiply and divide the given numbers when these buttons are clicked. Use output element to display the results.

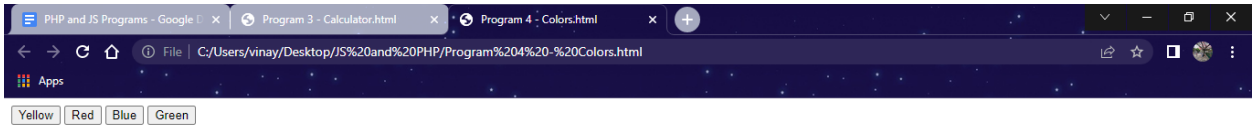



```
<html>
	<head>
		<script>
			function add()
			{
				var a,b;
				a=parseInt(document.getElementById("number1").value);
				b=parseInt(document.getElementById("number2").value);
				document.getElementById("result").innerHTML="The Sum
is:"+(a+b);
			}
			function subtract()
			{
				var a,b;
				a=parseInt(document.getElementById("number1").value);
				b=parseInt(document.getElementById("number2").value);
				document.getElementById("result").innerHTML="The Difference
is:"+(a-b);
			}
			function multiply()
			{
				var a,b;
```

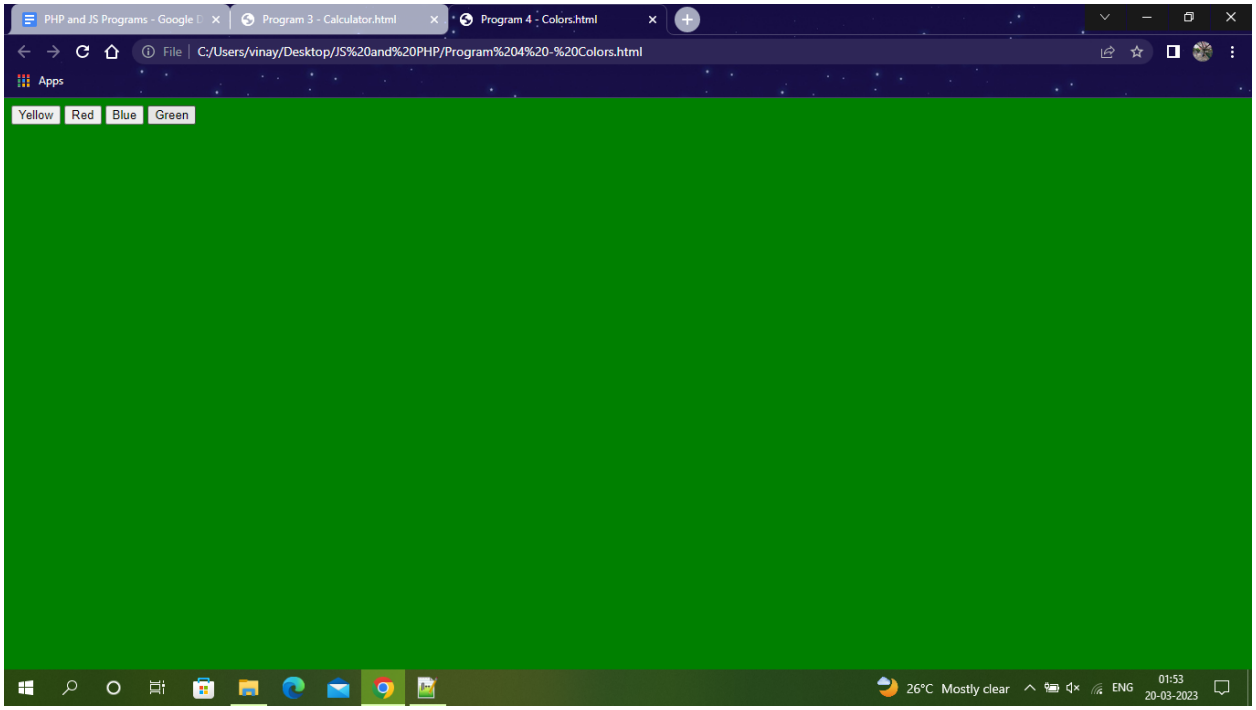
```
                        a=parseInt(document.getElementById("number1").value);
                        b=parseInt(document.getElementById("number2").value);
                        document.getElementById("result").innerHTML="The Product
is:"+(a*b);
                }
                function divide()
                {
                        var a,b;
                        a=parseInt(document.getElementById("number1").value);
                        b=parseInt(document.getElementById("number2").value);
                        document.getElementById("result").innerHTML="The Quotient
is:"+(a/b);
                }
        </script>
    </head>
    <body>
        <input type="text" placeholder="Enter first number" id="number1">
        <input type="text" placeholder="Enter second number" id="number2">
        <br>
        <input type="submit" value="Add" onClick="add()">
        <input type="submit" value="Subtract" onClick="subtract()">
        <input type="submit" value="Multiply" onClick="multiply()">
        <input type="submit" value="Divide" onClick="divide()">
        <p id="result">Result</p>
    </body>
</html>
```



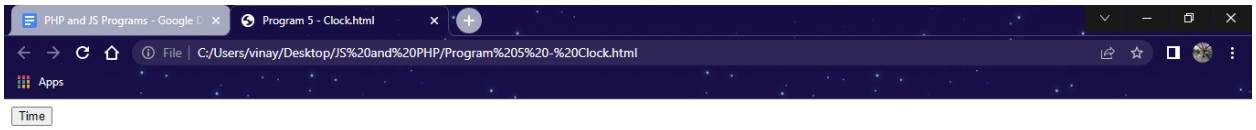
4. Write a JavaScript program to store different colors in an array and change the background color of the page using this array elements




```
<html>
	<head>
		<script>
			function color(i)
			{
				var colors=["Yellow","Red","Blue","Green"];
				document.body.style.background = colors[i];
			}
		</script>
	</head>
	<body>
		<input type="submit" value="Yellow" onClick="color(0)">
		<input type="submit" value="Red" onClick="color(1)">
		<input type="submit" value="Blue" onClick="color(2)">
		<input type="submit" value="Green" onClick="color(3)">
	</body>
</html>
```

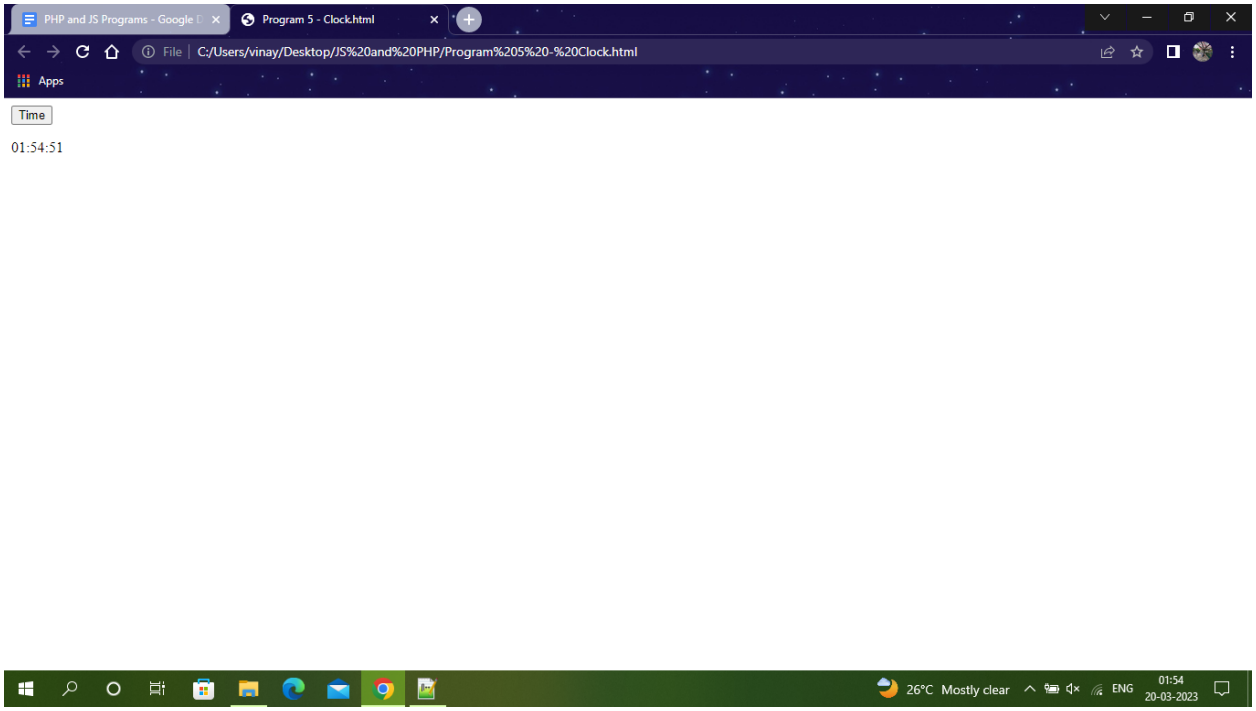

PHP and JS Programs - Google
Program 3 - Calculator.html
Program 4 - Colors.html
File | C:/Users/vinay/Desktop/JS%20and%20PHP/Program%204%20-%20Colors.html
Apps
Yellow
Red
Blue
Green
26°C Mostly clear
ENG
01:53
20-03-2023

5. Write a JavaScript program to create clock with a timing event.

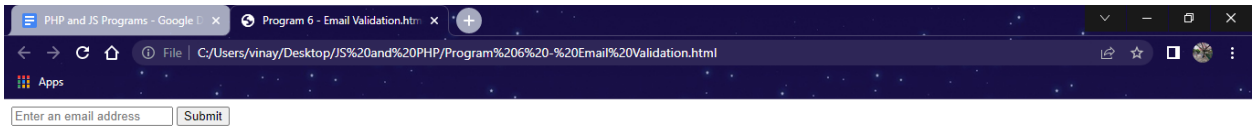



```
<html>
	<head>
		<script>
			function clock(i)
			{
				var today = new Date();
				var h = today.getHours();
				var m = today.getMinutes();
				var s = today.getSeconds();
				if(m<10)
					m='0'+m;
				if(s<10)
					s='0'+s;
				if(h<10)
					h='0'+h;
				document.getElementById("time").innerHTML=h+":"+m+":"+s;
				setTimeout(clock, 1000);
			}
		</script>
	</head>
	<body>
		<input type="submit" value="Time" onClick="clock()">
		<p id="time"></p>
```

```
        </body>
</html>
```

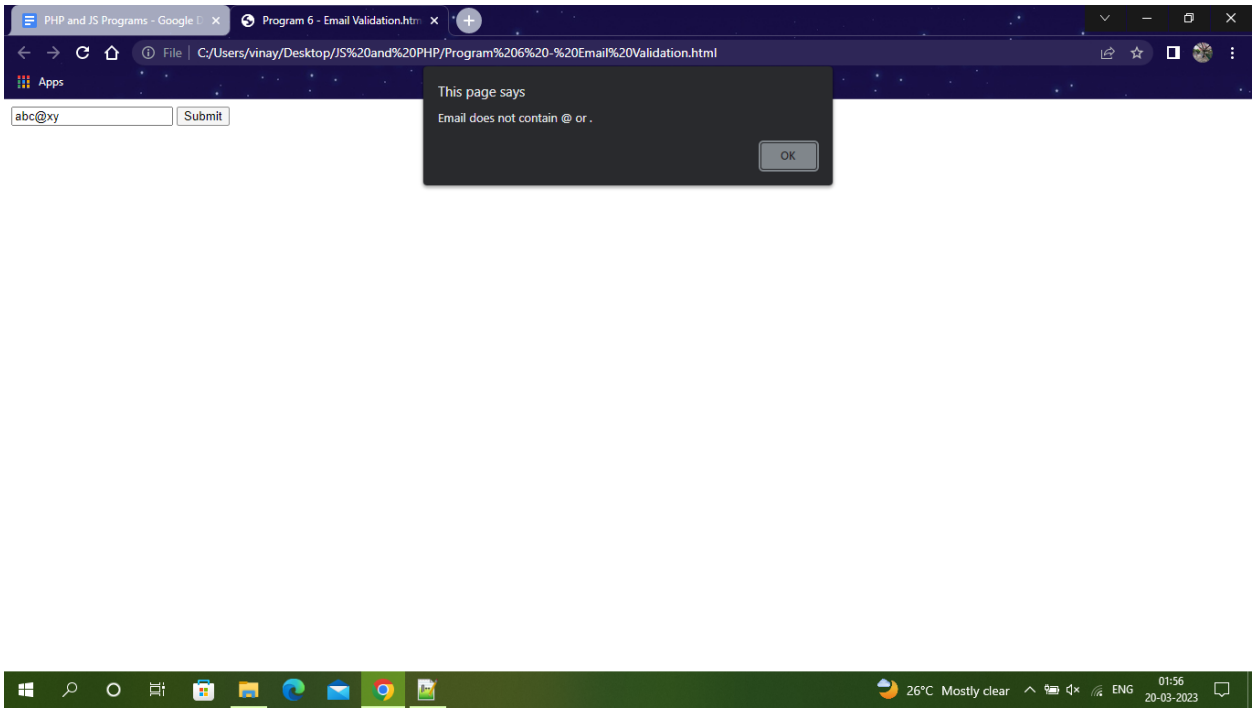

PHP and JS Programs - Google
Program 5 - Clock.html
File | C:/Users/vinay/Desktop/JS%20and%20PHP/Program%205%20-%20Clock.html
Apps
Time
01:54:51
26°C Mostly clear
ENG
01:54
20-03-2023

6. Write a JavaScript Program to validate email based on the following condition
Mail id must contain the @ and . character
There must be at least one character before and after the @.
There must be at least two characters after . (dot).




```
<html>
	<head>
		<script>
			function fun()
			{
				var email;
				email=document.getElementById("email").value;
				if(email.includes('@')==false || email.includes('.')==false)
					alert("Email does not contain @ or .");
				else if(email.endsWith('@')==true)
					alert("Emails cannot end with @ symbol.");
				else if(email.split('.')[1].length<2)
					alert("There should be aleast two characters after .")
				else
					alert("Email submitted. Email is: "+email);
			}
		</script>
	</head>
	<body>
		<input type="text" placeholder="Enter an email address" id="email">
```

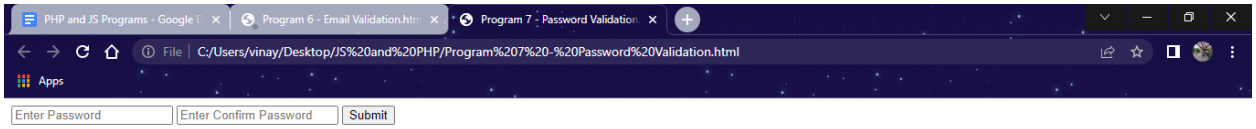
```
                <input type="submit" value="Submit" onClick="fun()">
        </body>
</html>
```



7. Write a JavaScript program for Password validation based on the following condition

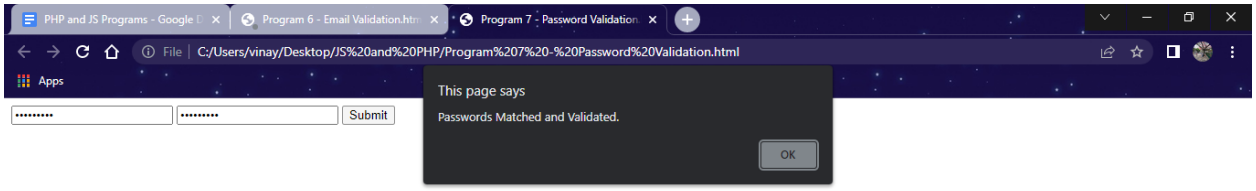
Password and confirm password must be same

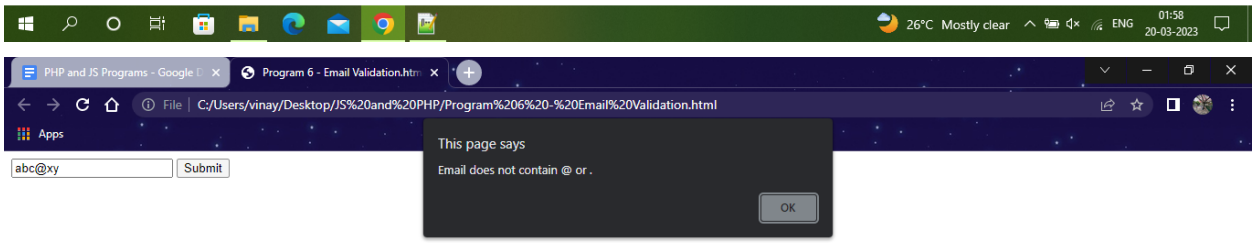
Length of password must be greater than 8 characters



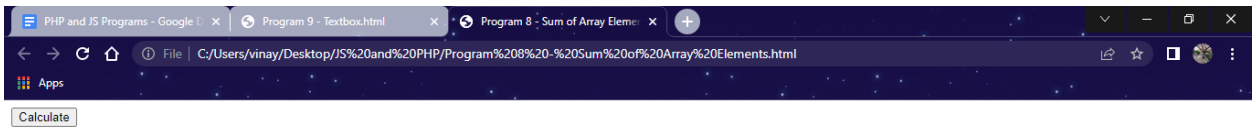

```
<html>
	<head>
		<script>
			function fun()
			{
				var pass,cpass;
				pass=document.getElementById("pass").value;
				cpass=document.getElementById("cpass").value;
				if(pass.length<=8)
					alert("Password must be atleast 8 characters long.");
				else if(pass!=cpass)
					alert("Password and confirm password must be the
same.");
				else
					alert("Passwords Matched and Validated.");
			}
		</script>
	</head>
	<body>
```

```
            <input type="password" placeholder="Enter Password" id="pass">
            <input type="password" placeholder="Enter Confirm Password" id="cpass">
            <input type="submit" value="Submit" onClick="fun()">
        </body>
</html>
```



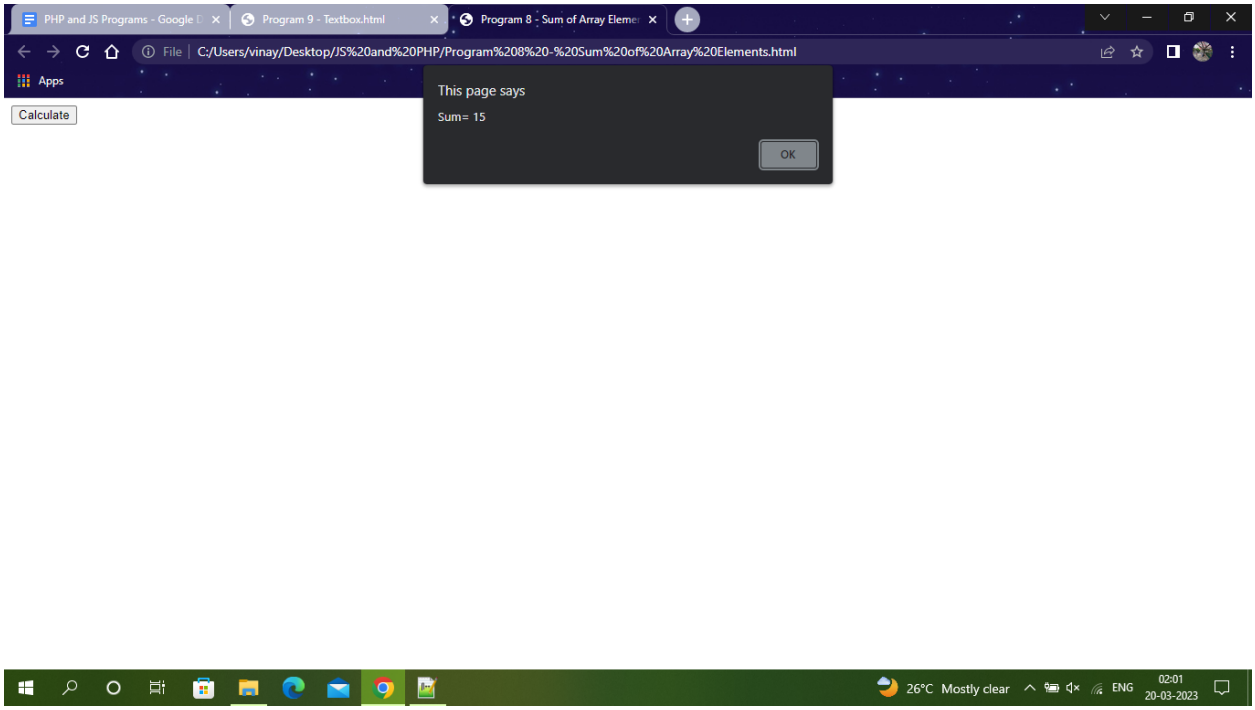


8. Write a JavaScript Program to create an Array and read values using Prompt popup box and display the sum of elements in an Alert Box



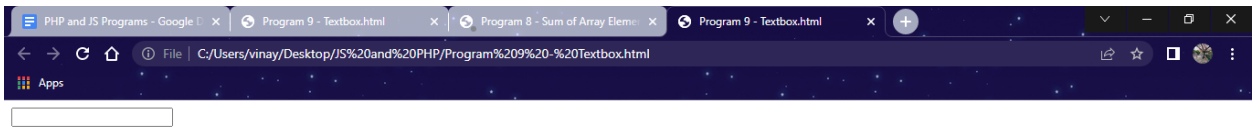

```
<html>
	<head>
		<script>
			function fun()
			{
				var i,size,sum=0;
				var arr = [];
				size=parseInt(prompt("Enter array size: "));
				for (i = 0; i < size; i++)
				{
					arr[i]=parseInt(prompt("Enter element "+(i+1)));
					sum=sum+arr[i];
				}
				alert("Sum= "+sum);
			}
		</script>
	</head>
	<body>

		<input type="submit" value="Calculate" onClick="fun()">
	</body>
</html>
```

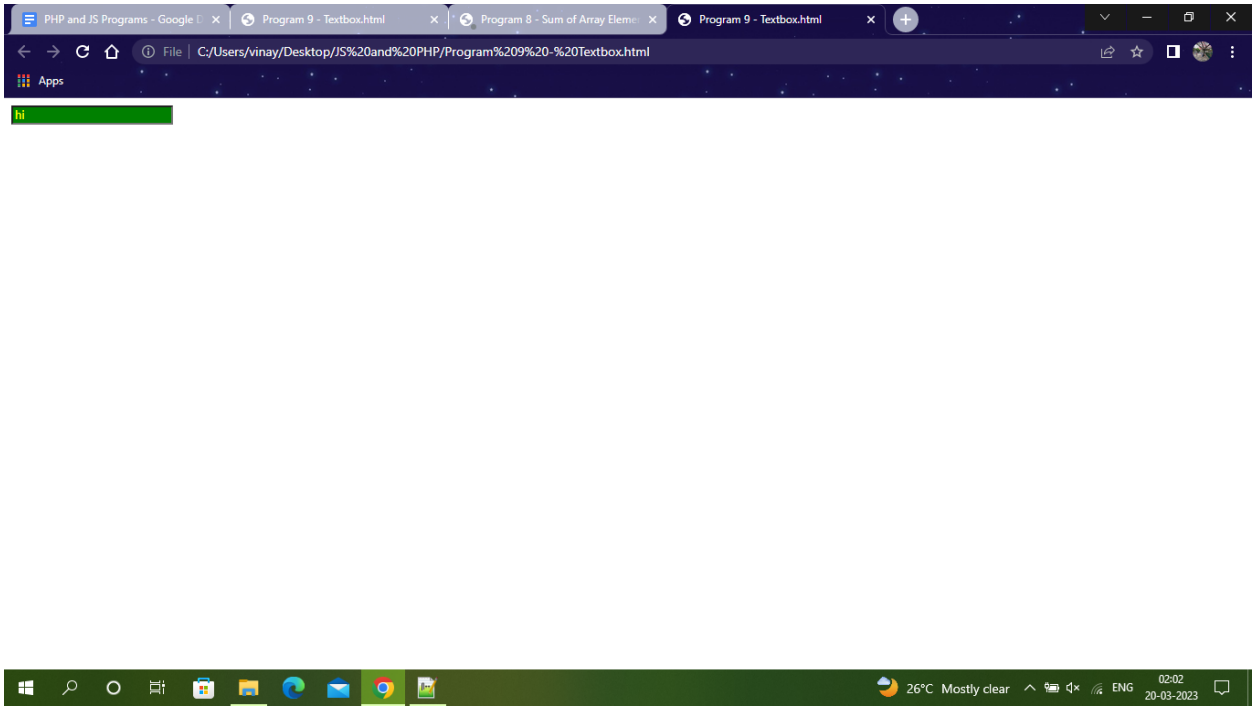

PHP and JS Programs - Google
Program 9 - Textbox.html
Program 8 - Sum of Array Eleme
File | C:/Users/vinay/Desktop/JS%20and%20PHP/Program%208%20-%20Sum%20of%20Array%20Elements.html
Apps
Calculate
This page says
Sum= 15
OK

26°C Mostly clear
ENG
02:01
20-03-2023

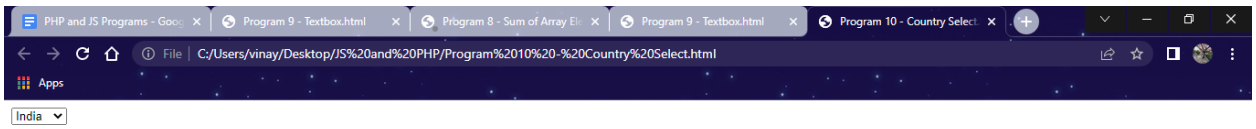
9. Change the text colour and back colour of a TextBox using onfocus and onBlur Event




```
<html>
	<head>
		<script>
			function textcolor()
			{
				document.getElementById("text").style.color = "yellow";
			}
			function backcolor()
			{
				document.getElementById("text").style.backgroundColor =
"green";
			}
		</script>
	</head>
	<body>
		<input type="text" id="text" onFocus="textcolor()" onBlur="backcolor()">
	</body>
</html>
```

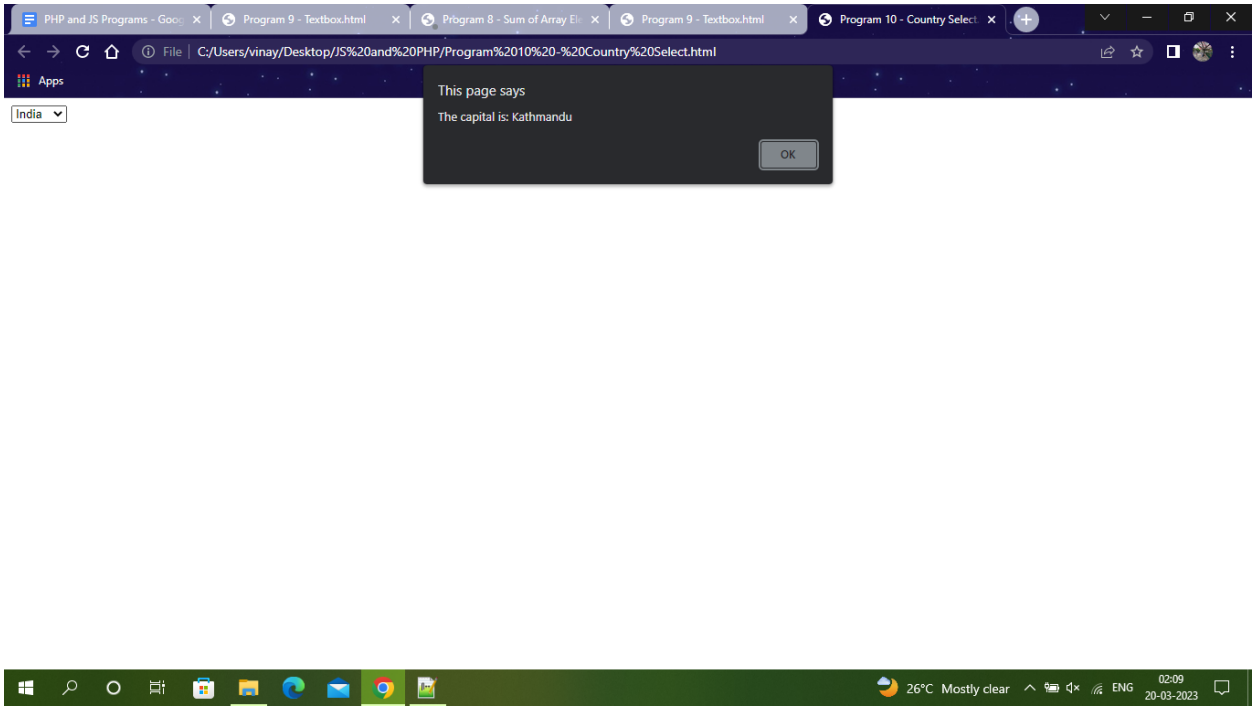

PHP and JS Programs - Google D
Program 9 - Textbox.html
Program 8 - Sum of Array Eleme
Program 9 - Textbox.html
File | C:/Users/vinay/Desktop/JS%20and%20PHP/Program%209%20-%20Textbox.html
Apps
hi
26°C Mostly clear
ENG
02:02
20-03-2023

10.Write a JavaScript program to display Capital of a country using onchange event. The country is selected from a select box and capital is displayed on a TextBox.

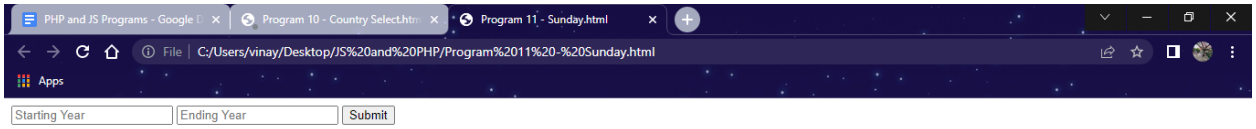



```
<html>
	<head>
		<script>
			function fun()
			{
				var capitals=["New Delhi","Tokyo","Kathmandu","Beijing"];
				var country;
				country=document.getElementById("countries").value;
				alert("The capital is: "+capitals[country]);
			}

		</script>
	</head>
	<body>
		<select onchange="fun()" id="countries">
			<option value="0">India</option>
			<option value="1">Japan</option>
			<option value="2">Nepal</option>
			<option value="3">China</option>
		</select>
	</body>
</html>
```


PHP and JS Programs - Goo
Program 9 - Textbox.html
Program 8 - Sum of Array El
Program 9 - Textbox.html
Program 10 - Country Select
File | C:/Users/vinay/Desktop/JS%20and%20PHP/Program%2010%20-%20Country%20Select.html
Apps
India
This page says
The capital is: Kathmandu
OK
26°C Mostly clear
ENG
02:09
20-03-2023

11.Write a JavaScript program to find 1st January be a Sunday between a range of Years.




```
<html>
	<head>
		<script>
			function fun()
			{
				var from,to,i;
				var date=new Date();
				date.setMonth(0);
				date.setDate(1);
				from=parseInt(document.getElementById("from").value);
				to=parseInt(document.getElementById("to").value);
				for(i=from;i<=to;i++)
				{
					date.setFullYear(i);
					if(date.getDay()==0)

document.getElementById("result").innerHTML+=i+" ";
				}
			}

		</script>
	</head>
```

```
        <body>
            <input type="text" placeholder="Starting Year" id="from">
            <input type="text" placeholder="Ending Year" id="to">
            <input type="submit"onClick="fun()">
            <p id="result"></p>
        </body>
</html>
```