

01.Create a form with the elements of Textboxes, Radio buttons, Checkboxes, and so on. Write JavaScript code to validate the format in email, and mobile number in 10 characters, if a textbox has been left empty, popup an alert indicating when email, mobile number and textbox has been left empty.

```
<!DOCTYPE html>
<html>
<head>
<title>Form Validation</title>
</head>
<body>

<h2>Form Validation</h2>

<form onsubmit="return validateForm()">
    Email: <input type="text" id="email"><br><br>
    Mobile Number: <input type="text" id="mobile"><br><br>
    Address: <input type="text" id="textbox"><br><br>

    Gender:
    <input type="radio" name="gender" value="male"> Male
    <input type="radio" name="gender" value="female"> Female
    <br><br>

    Interests:
    <input type="checkbox" value="music"> Music
    <input type="checkbox" value="sports"> Sports
    <br><br>

    <input type="submit" value="Submit">
</form>

<script>
function validateForm() {
    let email = document.getElementById("email").value;
    let mobile = document.getElementById("mobile").value;
    let address = document.getElementById("textbox").value;
}
```

```

let msg = "";

if (!email.includes("@") || !email.includes("."))

msg += "Enter a valid email.\n";

if (mobile.length !== 10)

msg += "Mobile number must be 10 digits.\n";

if (!email || !mobile || !address)

msg += "All fields are required.\n";

if (msg) {

alert(msg);

return false;

}

return true;
}
</script>

```

</body>

</html>

02.Develop an HTML form which accepts any mathematical expression. Write a JavaScript code to evaluate the expression and display the result.

```

<!DOCTYPE html>

<html>

<head>

<title>Math Evaluator</title>

</head>

<body>

<h2>Math Expression Evaluator</h2>

```

```

<form>
    Enter expression:
    <input type="text" id="expr">
    <button type="button" onclick="evaluateExpr()">Evaluate</button>
</form>

<p id="result"></p>

<script>
function evaluateExpr() {
    let expr = document.getElementById("expr").value;
    try {
        let res = eval(expr);
        document.getElementById("result").textContent = "Result: " + res;
    } catch {
        document.getElementById("result").textContent = "Invalid expression";
    }
}
</script>

</body>
</html>

```

03.Create a page with dynamic effects. Write the code to include layers and basic animations

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Basic Animation</title>
    <style>
        #layer1{position:absolute; top:50px;left:50px;}
        #layer2{position:absolute; top:50px;left:400px;}
        #layer3{position:absolute; top:50px; left:800px}
    </style>

```

```
img {  
    width: 200px;  
    height: 200px;  
    cursor: pointer;  
}  
</style>  
</head>  
<body>  
  
<div id="layer1">  
      
</div>  
  
<div id="layer2">  
      
</div>  
  
<div id="layer3">  
      
</div>  
  
<script>  
function moveImage(layerId) {  
    let top = prompt("Enter top value:");  
    let left = prompt("Enter left value:");  
  
    let layer = document.getElementById(layerId);  
  
    layer.style.top = top + "px";  
    layer.style.left = left + "px";  
}  
</script>  
</body>  
</html>
```

04. Write a JavaScript code to find the sum of N natural numbers. (use userdefined function)

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Sum of N Numbers</title>
</head>
<body>
<center>
<h1>Finding sum of natural numbers using JavaScript</h1>
<button onclick="sum()">Sum</button>
</center>

<script>
function sum() {
    let num = parseInt(prompt("Enter a number:"));
    let total = 0;

    for (i = 1; i <= num; i++) {
        total += i;
    }

    document.writeln("Sum of " + num + " natural numbers: " + total);
}

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

05. Write a JavaScript code block using arrays and generate the current date in words, this should include the day, month and year

```
<!DOCTYPE html>
<html>
```

```

<head>
<title>Current Date in Words</title>
</head>
<body>

<h2>Current Date in Words</h2>
<p id="dateInWords"></p>

<script>
const days = ["Sunday","Monday","Tuesday","Wednesday","Thursday","Friday","Saturday"];
const months =
["January","February","March","April","May","June","July","August","September","October","November","December"]
;
let d = new Date();

let result = days[d.getDay()] + ", " + months[d.getMonth()] + " " + d.getDate() + ", " + d.getFullYear();
document.getElementById("dateInWords").textContent = "Current date in words: " + result;
</script>

</body>
</html>

```

06.Create a form for Student information. Write JavaScript code to find Total, Average, Result and Grade.

```

<html>
<head>
<title>Student Information Form</title>
</head>
<body>

<h2>Student Information</h2>

<form>

```

```
Math: <input type="number" id="math"><br><br>
Science: <input type="number" id="science"><br><br>
English: <input type="number" id="english"><br><br>
<button type="button" onclick="calculate()">Calculate</button>
</form>
```

<h2>Result Details</h2>

```
Total Marks: <input type="text" id="total"><br><br>
```

```
Average: <input type="text" id="avg"><br><br>
```

```
Result: <input type="text" id="res"><br><br>
```

```
Grade: <input type="text" id="grade">
```

```
<script>
```

```
function calculate() {
```

```
    let m = Number(document.getElementById("math").value);
```

```
    let s = Number(document.getElementById("science").value);
```

```
    let e = Number(document.getElementById("english").value);
```

```
    let total = m + s + e;
```

```
    let avg = total / 3;
```

```
    let res = (m >= 35 && s >= 35 && e >= 35) ? "Pass" : "Fail";
```

```
    let grade =
```

```
        avg >= 90 ? "A+" :
```

```
        avg >= 80 ? "A" :
```

```
        avg >= 70 ? "B" :
```

```
        avg >= 60 ? "C" :
```

```
        avg >= 50 ? "D" : "F";
```

```
    total = total.toFixed(2);
```

```
    avg = avg.toFixed(2);
```

```

document.getElementById("total").value = total;
document.getElementById("avg").value = avg;
document.getElementById("res").value = res;
document.getElementById("grade").value = grade;
}

</script>

</body>
</html>

```

07.Create a form for Employee information. Write JavaScript code to find DA, HRA, PF, TAX, Gross pay, Deduction and Net pay.

```

<!DOCTYPE html>
<html>
<head>
<title>Employee Salary</title>
</head>
<body>

<h2>Employee Salary Calculator</h2>

Name: <input id="name"><br><br>
Number: <input id="num"><br><br>
Basic Salary: <input id="sal" type="number" ><br><br>

<button onclick="calc()">Calculate</button>
<button onclick="resetForm()">Reset</button>

<p id="out"></p>

<script>
function calc() {
let name = document.getElementById("name").value;

```

```
let num = document.getElementById("num").value;
let sal = Number(document.getElementById("sal").value);

let hra = sal * 0.40;
let da = sal * 0.60;
let gross = sal + hra + da;

let pf = sal * 0.13;
let tax = sal * 0.20;
let deduct = pf + tax;

let net = gross - deduct;

document.getElementById("out").innerText =
"Name: " + name +
"\nNumber: " + num +
"\n\nBasic: " + sal +
"\nHRA: " + hra +
"\nDA: " + da +
"\nGross: " + gross +
"\n\nPF: " + pf +
"\nTAX: " + tax +
"\nDeduction: " + deduct +
"\n\nNet Pay: " + net;
}

</script>
```

```
</body>
```

```
</html>
```

PHP

08. Write a program in PHP to change background color based on day of the week using if else if statements and using arrays

```

<?php
$colors = [
    'Sunday' => '#ffcccb',
    'Monday' => '#ffebcd',
    'Tuesday' => '#add8e6',
    'Wednesday' => '#98fb98',
    'Thursday' => '#f0e68c',
    'Friday' => '#dda0dd',
    'Saturday' => '#c0c0c0'
];

$day = date('l');
$bg = $colors[$day] ?? '#ffffff';
?>
<!DOCTYPE html>
<html>
<head>
<title>Background Color</title>
<style>
    body { background-color: <?= $bg ?>; }
</style>
</head>
<body>

<h1>Today is <?= $day ?></h1>

</body>
</html>

```

09. Write a simple program in PHP for

- 1. Generating prime number.**
- 2. Generate Fibonacci series.**

```

<?php
echo "<h3>Prime numbers from 1 to 50:</h3>";

for ($n = 2; $n <= 50; $n++) {
    $prime = true;

    for ($i = 2; $i < $n; $i++) {
        if ($n % $i == 0) {
            $prime = false;
            break;
        }
    }

    if ($prime) echo $n . " ";
}
?>

```

11. Write a PHP Script to print the following pattern on the Screen:

```

*****
****
 ***
 **
 *

```

```

<?php
$rows=5;
for($i=$rows; $i>=1; $i--){
    for($j=$rows; $j>$i; $j--){
        echo"nbsp;";
    }
    for($k=1;$k<=$i;$k++){
        echo"";
    }
    echo"<br>";
}

```

```
}
```

```
?>
```

12. Write a simple program in PHP for Searching of data by different criteria

```
<?php  
$users = [  
    ['id'=>1,'name'=>'anjali','age'=>20,'email'=>'anjali@example.com'],  
    ['id'=>2,'name'=>'neena','age'=>19,'email'=>'neena@example.com'],  
    ['id'=>3,'name'=>'madhu','age'=>22,'email'=>'madhu@example.com'],  
];  
  
echo "Search results for age=19:<br>";  
  
foreach ($users as $u) {  
    if ($u['age'] == 19) {  
        echo "ID: {$u['id']}, Name: {$u['name']}, Email: {$u['email']}<br>";  
    }  
}  
?>
```

13. Write a function in PHP to generate a captcha code.

```
<?php  
session_start();  
  
function makeCaptcha($len = 6) {  
    $letters = 'ABCDEFabcdef012345';  
    $code = "";  
  
    for ($i = 0; $i < $len; $i++) {  
        $code .= $letters[rand(0, strlen($letters) - 1)];  
    }  
}
```

```
$_SESSION['captcha'] = $code;  
return $code;  
}
```

```
echo "Captcha: " . makeCaptcha();  
?>
```

14. Write a program in PHP for setting and retrieving a cookie

```
<?php  
setcookie("user", "ABCD", time() + 86400, "/");  
  
echo "Cookie 'user' is set.<br><br>";  
  
if (isset($_COOKIE["user"])) {  
    echo "Cookie value: " . $_COOKIE["user"];  
} else {  
    echo "Cookie not set.";  
}  
?>
```

15. Write a PHP program to create a simple webpage of a College

```
<!DOCTYPE html>  
<html>  
<head>  
<title>College Website</title>  
</head>  
<body>  
  
<h1>Welcome to Our College</h1>  
  
<nav>  
<a href="#">Home</a>
```

```

<a href="#">About</a>
<a href="#">Courses</a>
<a href="#">Contact</a>
</nav>

<h2>About Our College</h2>
<p>Brief description of our college.</p>

<h2>Available Courses</h2>
<ul>
<?php
foreach(['Computer Science','Engineering','Business','Arts','Science'] as $c)
echo "<li>$c</li>";
?>
</ul>

<h2>Contact Information</h2>
<p>Address: 123 College Avenue</p>
<p>Email: info@college.com</p>
<p>Phone: 080-25634869</p>

<p>&copy; <?php echo date("Y"); ?> Our College</p>

</body>
</html>

```

16. Write a program in PHP for exception handling for :

- i. Divide by zero
- ii. Checking date format.

```

<?php
$a = 10;
$b = 2;

```

```
if ($b == 0) {
    echo "Error: cannot divide by zero.";
} else {
    echo "Result: " . ($a / $b) . "<br>";
}

$date = "2023-12-25";

if (DateTime::createFromFormat("Y-m-d", $date)) {
    echo "Date is valid: " . $date;
} else {
    echo "Error: wrong date format.";
}
?>
```