

EXPERIMENT 10

10.1: Here is a complete HTML form with **Email ID validation**, **Length validation** (for password), and **Retype password validation** using HTML5 and simple JavaScript.

```
<!DOCTYPE html>
<html>
<head>
<title>Registration Form Validation</title>
<link rel="stylesheet" href="exp101.css">
<script>
function validateForm() {
    var email = document.getElementById("email").value;
    var password = document.getElementById("password").value;
    var retype = document.getElementById("retype").value;
    var emailPattern = /^[^@]+@\w+(\.\w+)+\w$/;

    if (!emailPattern.test(email)) {
        alert("Please enter a valid email address.");
        return false;
    }
    if (password.length < 8) {
        alert("Password must be at least 8 characters long.");
        return false;
    }
    if (password !== retype) {
        alert("Passwords do not match.");
        return false;
    }
    return true;
}
</script>
</head>
<body>
<div class="form-container">
    <h2>Register</h2>
    <form onsubmit="return validateForm();">
        <label for="email">Email</label>
        <input type="email" id="email" name="email" required>

        <label for="password">Password</label>
        <input type="password" id="password" name="password" required minlength="8" placeholder="Min 8 characters">

        <label for="retype">Retype Password</label>
        <input type="password" id="retype" name="retype" required minlength="8" placeholder="Re-enter password">

        <input type="submit" value="Register">
    </form>
</div>
</body>
```

Output:-

The image shows a registration form titled "Register" on a light blue background. The form is a white rounded rectangle containing three input fields and a button. The first field is labeled "Email". The second field is labeled "Password" and has a hint "Min 8 characters". The third field is labeled "Retype Password" and has a hint "Re-enter password". Below these fields is a blue button labeled "Register".

- 10.2:-a) write a php program to print all months of a year using a switch case.
- b) Using for loop and while loop print all the planets and their moons in php
- C)Find the factorial of a number
- d) Armstrong number using php
- e) prime number in php

```
1 <?php
2 for ($i = 1; $i <= 12; $i++) {
3     switch ($i) {
4         case 1: echo "January\n"; break;
5         case 2: echo "February\n"; break;
6         case 3: echo "March\n"; break;
7         case 4: echo "April\n"; break;
8         case 5: echo "May\n"; break;
9         case 6: echo "June\n"; break;
10        case 7: echo "July\n"; break;
11        case 8: echo "August\n"; break;
12        case 9: echo "September\n"; break;
13        case 10: echo "October\n"; break;
14        case 11: echo "November\n"; break;
15        case 12: echo "December\n"; break;
16    }
17 }
18 ?>
19
20 <?php
```

Output:-

```
January
February
March
April
May
June
July
August
September
October
November
December
```

```
<?php
- $planets = [
    "Mercury" => [],
    "Venus" => [],
    "Earth" => ["Moon"],
    "Mars" => ["Phobos", "Deimos"],
    "Jupiter" => ["Io", "Europa", "Ganymede", "Callisto"],
    "Saturn" => ["Titan", "Enceladus", "Rhea", "Mimas"],
    "Uranus" => ["Miranda", "Ariel", "Umbriel", "Titania", "Oberon"],
    "Neptune" => ["Triton", "Proteus"],
];
echo "--- Using for loop ---\n";
$planetNames = array_keys($planets);
- for ($i = 0; $i < count($planetNames); $i++) {
    $p = $planetNames[$i];
    echo "p: ";
    - if (count($planets[$p]) > 0) {
        echo implode(", ", $planets[$p]);
    } else {
        echo "No moon";
    }
    echo "\n";
}
echo "--- Using while loop ---\n";
$i = 0;
- while ($i < count($planetNames)) {
    $p = $planetNames[$i];
    echo "p: ";
    - if (count($planets[$p]) > 0) {
        echo implode(", ", $planets[$p]);
    } else {
        echo "No moon";
    }
    echo "\n";
    $i++;
}
?>
```

b)

output:-

```
--- Using for loop ---
Mercury: No moon
Venus: No moon
Earth: Moon
Mars: Phobos, Deimos
Jupiter: Io, Europa, Ganymede, Callisto
Saturn: Titan, Enceladus, Rhea, Mimas
Uranus: Miranda, Ariel, Umbriel, Titania, Oberon
Neptune: Triton, Proteus
--- Using while loop ---
Mercury: No moon
Venus: No moon
Earth: Moon
Mars: Phobos, Deimos
Jupiter: Io, Europa, Ganymede, Callisto
Saturn: Titan, Enceladus, Rhea, Mimas
Uranus: Miranda, Ariel, Umbriel, Titania, Oberon
Neptune: Triton, Proteus
```

```
<?php
function factorial($n) {
    $fact = 1;
    for ($i = 2; $i <= $n; $i++)
        $fact *= $i;
    return $fact;
}
echo factorial(5); // Output: 120
?>
```

c)

output:-

```
120
```

```
<?php
function isArmstrong($number) {
    $sum = 0;
    $temp = $number;
    $digits = strlen((string)$number);
    while ($temp != 0) {
        $rem = $temp % 10;
        $sum += pow($rem, $digits);
        $temp = (int)($temp / 10);
    }
    return ($number == $sum);
}
echo isArmstrong(153) ? "Yes" : "No"; // Output: Yes
?>
```

d)

output:-

Yes

e)

```
<?php
function isPrime($num) {
    if ($num <= 1) return false;
    for ($i = 2; $i <= sqrt($num); $i++) {
        if ($num % $i == 0) return false;
    }
    return true;
}
echo isPrime(7) ? "Prime" : "Not Prime"; // Output: Prime
?>
```

output:-

Prime

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