

**EXPERIMENT NO. 6****Working with String Manipulation, Numbers, and Math Functions in PHP**

**AIM:** To develop web pages to perform String Manipulations, Numbers and Math functions in PHP.

**Question (1).** Implement an similar program to create an calculator that has the functionality like 1-Add,2-Subtract,3-Multiply,4-Divide,5- Modulus as various options as buttons in the HTML Page. Format the web page similar to a calculator using various borders and colors using CSS

**SOURCE CODE:****PHP**

```
<!DOCTYPE html>
<html>
<head>
    <title>Activity 2</title>
</head>
<body>
<p align="right">
    <a href="http://localhost/phpScripts/"><button
onmouseover="this.style.color='red'">INDEX</button></a>
</p>
<form method="GET">
    First Number: <input type="text" name="first"><br>
    Second Number: <input type="text" name="second"><br>
    Operator:
    <select name="operator">
        <option value="Add">Add</option>
        <option value="Sub">Subtract</option>
        <option value="Mul">Multiply</option>
        <option value="Div">Divide</option>
    </select>
    <input type="submit" value="Calculate">
</form>
<?php
if (isset($_GET['first']) && isset($_GET['second']) && isset($_GET['operator']))
{
    class myclass {
        public $f, $s, $r;

        public function __construct($first, $second, $operator) {
            $this->f = $first;
            $this->s = $second;
```

```
        if ($operator == "Add") {
            $this->add();
        } elseif ($operator == "Sub") {
            $this->sub();
        } elseif ($operator == "Mul") {
            $this->mul();
        } elseif ($operator == "Div") {
            $this->div();
        }
    }

    public function add() {
        $this->r = $this->f + $this->s;
        echo "Result: " . $this->r;
    }

    public function sub() {
        $this->r = $this->f - $this->s;
        echo "Result: " . $this->r;
    }

    public function mul() {
        $this->r = $this->f * $this->s;
        echo "Result: " . $this->r;
    }

    public function div() {
        $this->r = $this->f / $this->s;
        echo "Result: " . $this->r;
    }
}

$neww = new myclass($_GET['first'], $_GET['second'], $_GET['operator']);
}
?>
</body>
</html>
```

**OUTPUT SCREENSHOT:**

INDEX

First Number: 4545

Second Number: 67

Operator: Add

Result: 4612

**Question (2). Write a PHP program to perform an transpose on 2-D matrices using Indexed Array**

**SOURCE CODE:**

**PHP**

```
<!DOCTYPE html>
<head>
    <title>Matrix Transpose</title>
</head>
<body>

<h2>Matrix Transpose</h2>

<form method="post" action="">
    <label for="matrix">Enter Matrix (comma-separated values): </label>
    <input type="text" name="matrix" id="matrix" required>
    <button type="submit">Transpose</button>
</form>

<?php
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $matrixInput = $_POST["matrix"];
    $rows = explode("\n", $matrixInput);
    $matrix = array_map(function($row) {
        return explode(",", $row);
    }, $rows);
    $transposedArray = transposeMatrix($matrix);
    echo "<h3>Original Matrix:</h3>";
    printMatrix($matrix);

    echo "<h3>Transposed Matrix:</h3>";
    printMatrix($transposedArray);
}

function transposeMatrix($matrix) {
    $transposedArray = [];

    foreach ($matrix as $rowIndex => $row) {
        foreach ($row as $colIndex => $value) {
            $transposedArray[$colIndex][$rowIndex] = $value;
        }
    }
}
```

```
        }  
    }  
  
    return $transposedArray;  
}  
  
function printMatrix($matrix) {  
    echo "<pre>";  
    foreach ($matrix as $row) {  
        echo implode(" ", $row) . "<br>";  
    }  
    echo "</pre>";  
}  
?>  
  
</body>  
</html>
```

OUTPUT SCREENSHOT:

## Matrix Transpose

Enter Matrix (comma-separated values):

**Original Matrix:**

2 4 5 6

**Transposed Matrix:**

2  
4  
5  
6