

1. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

HTML:

```
<!DOCTYPE html>

<html>

    <head>

        <title>Calculator – JavaScript and HTML</title>

    </head>

    <body>

        <div id='calc-contain'>

            <form name="calculator">

                <input type="text" name="answer" />

                <br>

                <input type="button" value=" 1 " onclick="calculator.answer.value += '1'" />
                <input type="button" value=" 2 " onclick="calculator.answer.value += '2'" />
                <input type="button" value=" 3 " onclick="calculator.answer.value += '3'" />
                <input type="button" value=" + " onclick="calculator.answer.value += '+'" />

                <br/>

                <input type="button" value=" 4 " onclick="calculator.answer.value += '4'" />
                <input type="button" value=" 5 " onclick="calculator.answer.value += '5'" />
                <input type="button" value=" 6 " onclick="calculator.answer.value += '6'" />
                <input type="button" value=" - " onclick="calculator.answer.value += '-'" />

                <br>

                <input type="button" value=" 7 " onclick="calculator.answer.value += '7'" />
                <input type="button" value=" 8 " onclick="calculator.answer.value += '8'" />
                <input type="button" value=" 9 " onclick="calculator.answer.value += '9'" />
                <input type="button" value=" x " onclick="calculator.answer.value += '*'" />
```

</br>

<input type="button" value=" c " onclick="calculator.answer.value = "" />

<input type="button" value=" 0 " onclick="calculator.answer.value += '0'" />

<input type="button" value=" = " onclick="calculator.answer.value = eval(calculator.answer.value)" />

<input type="button" value=" / " onclick="calculator.answer.value += '/'" />

</br>

</form>

<div id="agh">

<p>K.S. Institute Of Technology</p>

</div>

</div>

</body>

</html>

CSS:

#calc-contain{

position: relative;

width: 400px;

border: 2px solid black;

border-radius: 12px;

margin: 0px auto;

padding: 20px 20px 100px 20px;

}

#agh{

position: relative;

float: right;

margin-top: 15px;

color: red;

```
}  
#agh p{  
font-size: 20px;  
font-weight: 900;  
color: red;  
}  
input[type=button] {  
background: lightGray;  
width: 20%;  
font-size: 20px;  
font-weight: 900;  
border-radius: 7px;  
margin-left: 13px;  
margin-top: 10px;  
}  
input[type=button]:active {  
background-color: #3e8e41;  
box-shadow: 0 5px #666;  
transform: translateY(4px);  
}  
input[type=button]:hover {  
background-color: #003300;  
color: white;  
}  
input[type = text] {  
position: relative;  
display: block;  
width: 90%;  
margin: 5px auto;  
font-size: 20px;
```

```
padding: 10px;
box-shadow: 4px 0px 12px black inset;
}
```

2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

```
<html>
<head>
<script>
document.write('<h1 align="right">Squares and Cubes of the numbers from 0 to 10</h1>');
document.write('<center><table width="30%" border="1" bgcolor="white">');
document.write( "<tr> <th>Number</th> <th>Square</th> <th>Cube</th> </tr>" );
for(var n=0; n<=10; n++)
{
document.write( "<tr><td>" + n + "</td><td>" + n*n + "</td><td>" + n*n*n + "</td></tr>"
);
}
document.write( "</table>" );
</script>
</head>
</html>
```

3. Write a JavaScript code that displays text “TEXT-GROWING” with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays “TEXT-SHRINKING” in BLUE color. Then the font size decreases to 5pt.

```
<!DOCTYPE html>
<html>
<body>
<p id="myP1">TEXT-GROWING.</p>
<p id="myP2">TEXT-SHRINKING</p>
</body>
<script>
//Global declarations
var size = 10;
var i = 0;
var myWait1 = setInterval(GrowText1, 100);
function GrowText1()
{
    if(size<51)
    {
        size = size + 1;
        document.getElementById("myP1").style.fontSize = (size+'pt');
        document.getElementById("myP1").style.color = "red";
        //Hide the paragraph "text-shrinking"
        document.getElementById("myP2").style.visibility = "hidden";
    }
    else
    {
        clearInterval(myWait1);
        myWait1 = setInterval(ShrinkText1, 100);
        //Now hide the 1st paragraph and display the second paragraph
        document.getElementById("myP1").style.visibility = "hidden";
```

```
        document.getElementById("myP1").style.fontSize = '1pt';
        document.getElementById("myP2").style.visibility = "visible";
    }
}
function ShrinkText1()
{
    if(size>5)
    {
        size = size - 1;
        document.getElementById("myP2").style.fontSize = (size+'pt');
        document.getElementById("myP2").style.color = "blue";
    }
    else
    {
        clearInterval(myWait1);
    }
}
</script>
</html>
```

4. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:

a. Parameter: A string

b. Output: The position in the string of the left-most vowel

c. Parameter: A number

d. Output: The number with its digits in the reverse order.

4a) <html>

<head><title>3A PROGRAM</title>

<SCRIPT>

function vow(st)

{

var pos;

pos=st.search(/[aeiouAEIOU]/);

if(pos<0)

alert("pattern not found\n");

else

alert("Position of the left most vowel is "+(pos+1));

}

</SCRIPT>

</head>

<body>

<FORM><p>Enter the text</p>

<input type="text" id="voweltext"/>

<input type="button" value="Click here" onclick="vow(voweltext.value);"/>

</FORM></body>

</html>

4b)

```
<html>
<title>Reverse Number</title>
<script>
    function rev()
    {
        var n=prompt("Enter Number"," ");
        n=parseInt(n);
        var temp=0,rev=0;
        while(n>0)
        {
            temp=n%10;
            rev=rev*10+temp;
            n=n/10;
            n=parseInt(n);
        }
        document.write("The Reverse number is:",rev);
    }
</script>
<body>
<form>
<input type="button" value="Enter No" onclick="rev()";>
</form>
</body>
</html>
```


Apache, Lamp, PHP Installation

Step 1: Install Apache and Allow in Firewall

```
sudo apt-get update
```

```
sudo apt-get install apache2
```

Step 2: Install MySQL

```
sudo apt-get install mysql-server
```

Step 3: Install PHP

```
sudo apt-get install php libapache2-mod-php php-mcrypt php-mysql
```

Program No.6

Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.

PHP Script

```
<?php
$file = 'count.txt';

$count = strval(file_get_contents($file));

file_put_contents($file, $count + 1);

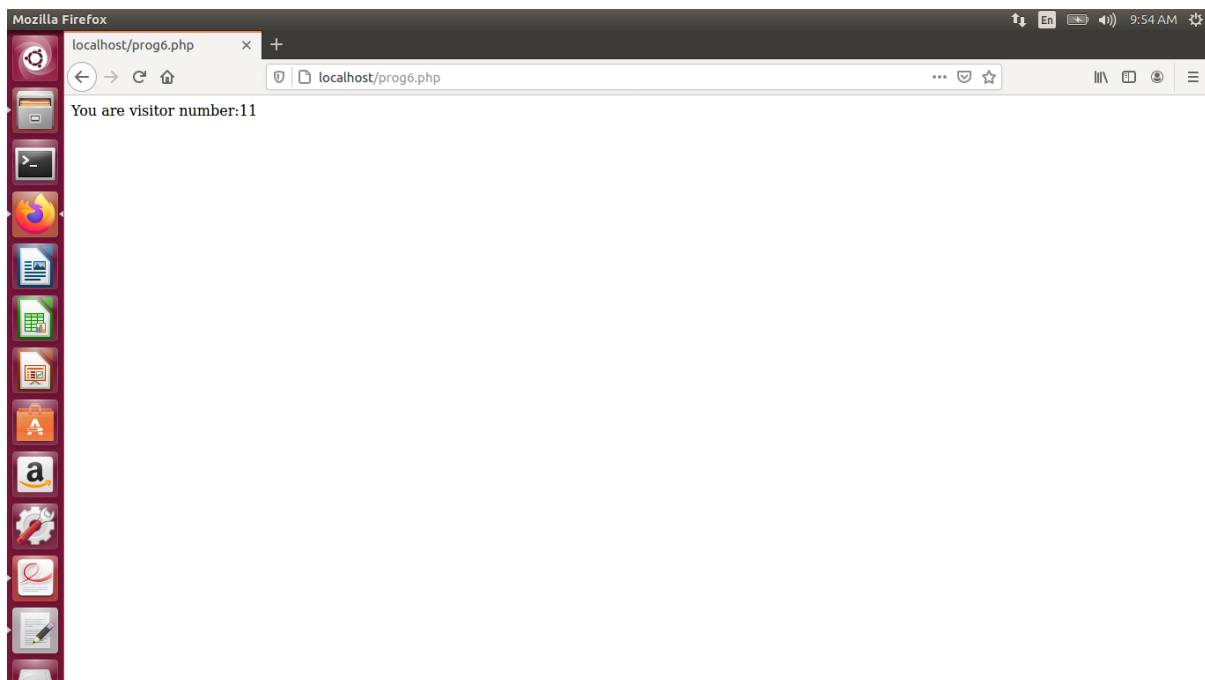
echo("You are visitor number:".$count);

?>
```

Steps for PHP Execution

1. vi prog6.php
2. Type the program
3. Save Program in vi editor Esc->**Shift** + **:** ->wq
4. Press Y for Yes to Program Save
5. Run the program in Web Browser localhost/prog6.php

Output



Program No.7

Write a PHP program to display a digital clock which displays the current time of the server.

PHP Script

```
<html>

<head>

<script type="text/javascript">
function startTime()
{
var d= new Date();
var h= d.getHours();
var m= d.getMinutes();
var s= d.getSeconds();
document.getElementById("txt").innerHTML= h+" : "+m+" : "+s;
setTimeout('startTime()', 1000);
}
</script>

<style type="text/css">
h1
{
font-size: 70px;
}
</style>

</head>

<body bgcolor = "#349" text="white" onload="startTime()">
<br>
<h1 align= "center"> The time from the local system is:
```

```
<span id= "txt"></span>
```

```
</h1>
```

```
</body>
```

```
</html>
```

```
</br>
```

```
</br>
```

```
</br>
```

```
</br>
```

```
<?php
```

```
$today = date("H:i:s");
```

```
?>
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>
```

```
<?php echo "The time from the server is " . date("h:i:sa");?>
```

```
</h1>
```

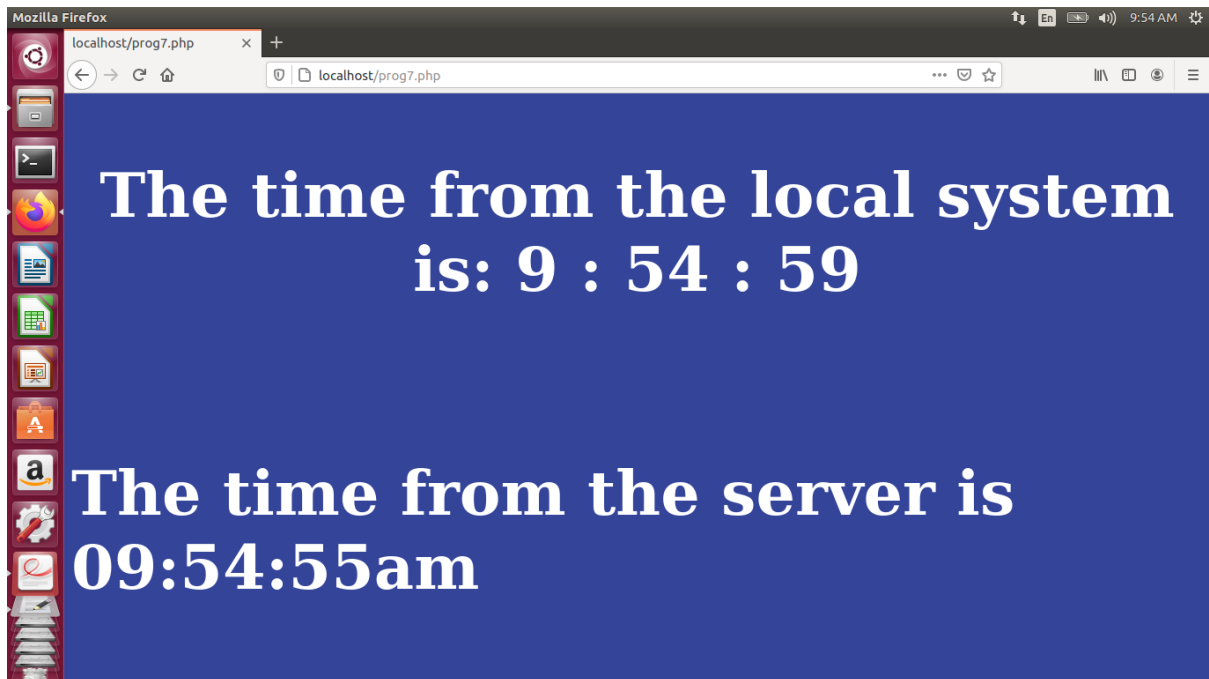
```
</body>
```

```
</html>
```

Steps for PHP Execution

1. vi prog7.php
2. Type the program
3. Save Program in vi editor Esc->**Shift** + **:** ->wq
4. Press Y for Yes to Program Save
5. Run the program in Web Browser localhost/prog7.php

Output



Program No.8

Write the PHP Programs to do the following

a) Implement simple calculator operations.

PHP Script

```
<?php
if(isset($_POST['sub']))
{
$txt1=$_POST['n1'];
$txt2=$_POST['n2'];
$oprnd=$_POST['sub'];
if($oprnd=="+")
$res=$txt1+$txt2;
else if($oprnd=="-")
$res=$txt1-$txt2;
else if($oprnd=="x")
$res=$txt1*$txt2;
else if($oprnd=="/")
$res=$txt1/$txt2;
}
?>

<html>

<form method="post" action="">

Calculator

</br>

No1:<input name="n1" value="<?php echo $txt1; ?>" >

</br>

No2:<input name="n2" value="<?php echo $txt2; ?>">

</br>

Res:<input name="res" value="<?php echo $res; ?>">
```

```
</br>

<input type="submit" name="sub" value="+">
<input type="submit" name="sub" value="-">
<input type="submit" name="sub" value="x">
<input type="submit" name="sub" value="/">

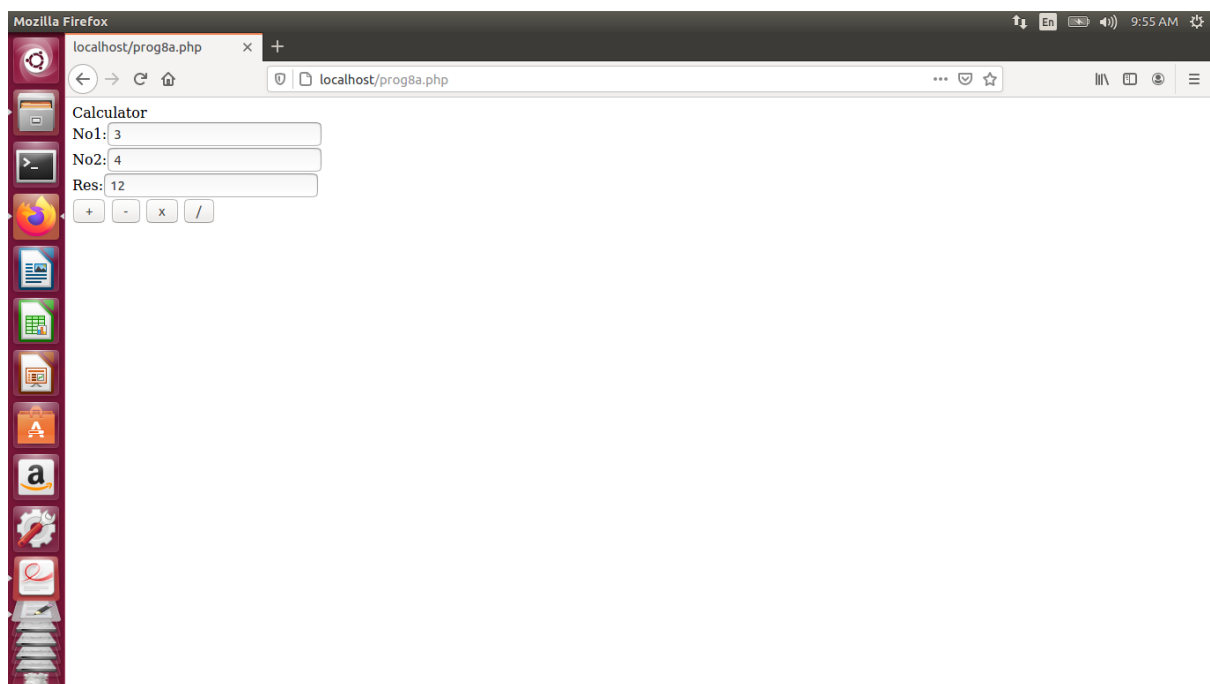
</form>

</html>
```

Steps for PHP Execution

1. vi prog8a.php
2. Type the program
3. Save Program in vi editor Esc->**Shift** + **:** ->wq
4. Press Y for Yes to Program Save
5. Run the program in Web Browser localhost/prog8a.php

Output



Program No.8

Write the PHP Programs to do the following

b) Transpose of a matrix & c) Addition of matrix and multiplication of two matrices.

PHP Script

```
<?php
header('Content-Type: text/plain');

$matrix1 = array(
    array(1, 2),
    array(4, 5),
);

$matrix2 = array(
    array(1, 2),
    array(4, 5),
);

echo "\n\n\n";
echo "The order of the matrix A is:" .count($matrix1)."x".count($matrix1[0]);
echo "\n";
echo "The order of the matrix B is:" .count($matrix1)."x".count($matrix2[0]);
echo "\n";

$rowCount= count($matrix1);
$colCount = count($matrix1[0]);

echo "The input matrix A is:\n";
for($r=0; $r<$rowCount; $r++)
{
    for($c=0; $c < $colCount; $c++)
```



```

        {
            echo $matrix1[$r][$c]." \t";
        }
        echo "\n";
    }

```

```

echo "The input matrix B is:\n";
for($r=0; $r<$rowCount; $r++)
{
    for($c=0; $c < $colCount; $c++)
    {
        echo $matrix1[$r][$c]." \t";
    }
    echo "\n";
}

```

```

echo "\nThe output Transpose of matrix is:\n";

```

```

for($r=0; $c < $colCount; $r++)
{
    for($c=0; $c < $rowCount; $c++)
    {
        echo $matrix1[$c][$r]." \t";
    }
    echo "\n";
}

```

```

$rowCount= count($matrix1);
$colCount = count($matrix1[0]);
$rowCount2 = count($matrix2);

```

```
$colCount2 = count($matrix2[0]);
```

```
echo "\nThe sum of matrix is:\n";
```

```
for($r = 0; $r < $rowCount; $r++)
```

```
{
```

```
    for($c=0; $c < $colCount; $c++)
```

```
    {
```

```
        $val= $matrix1[$r][$c] + $matrix2[$r][$c];
```

```
        echo $val."\t";
```

```
    }
```

```
    echo "\n";
```

```
}
```

```
$rowCount= count($matrix1);
```

```
$colCount = count($matrix1[0]);
```

```
$rowCount2 = count($matrix2);
```

```
$colCount2 = count($matrix2[0]);
```

```
echo "\nThe Multiplication of matrix is:\n";
```

```
if($colCount == $rowCount2)
```

```
{
```

```
    for($r=0; $r < $rowCount; $r++)
```

```
    {
```

```
        for($c=0; $c < $colCount; $c++)
```

```
        {
```

```
            $val= $matrix1[$r][$c] * $matrix2[$r][$c];
```

```
            echo $val."\t";
```

```
        }
```

```

        echo "\n";

    }

}

else

{

    echo "The matrix multiplication is not possible.";

}

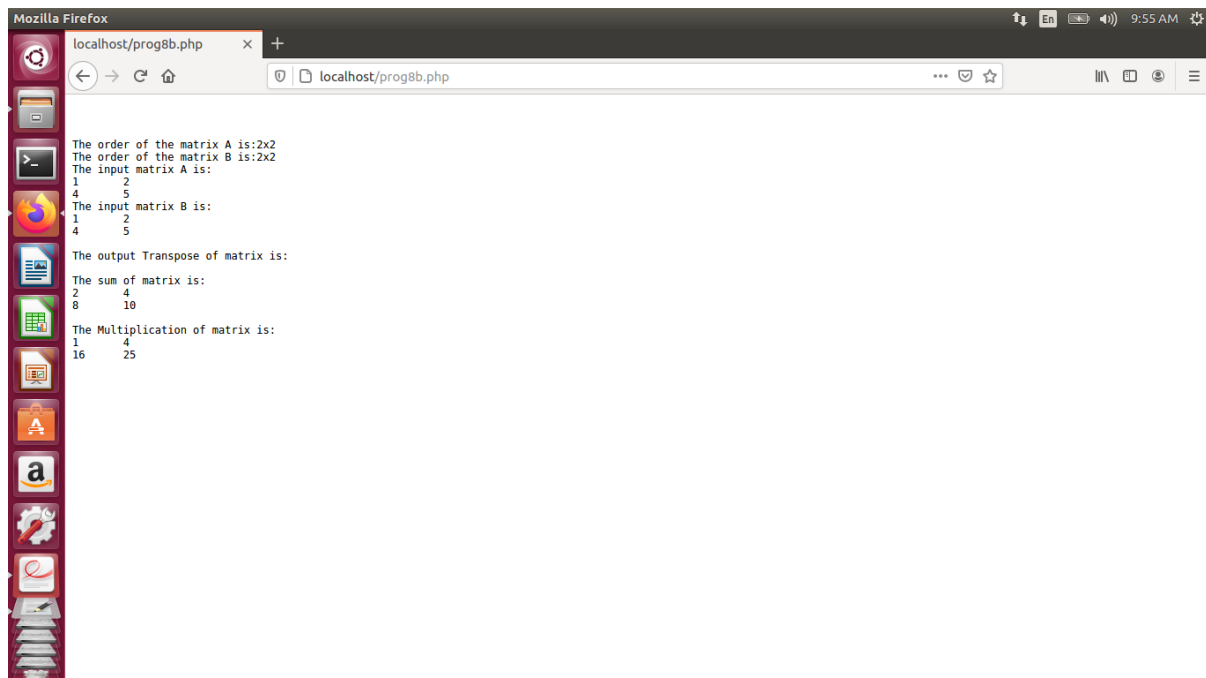
?>

```

Steps for PHP Execution

1. vi prog8b.php
2. Type the program
3. Save Program in vi editor Esc->**Shift** + **:** ->wq
4. Press Y for Yes to Program Save
5. Run the program in Web Browser localhost/prog8b.php

Output



Program No.9

Write a PHP program named states.py that declares a variable states with the value "Mississippi Alabama Texas Massachusetts Kansas". Write a php program that does the following:

- a. Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList.**
- b. Search for a word in states that begins with k and ends in s. Perform a case insensitive comparison. [Note: Passing re.I as s second parameter to method compile performs a case-insensitive comparison.]Store this word in element 1 of statesList.**
- c. Search for a word in states that begins with M and ends in s. Store this element in 2 of the list.**
- d. Search for a word in states that ends in a. Store this word in element 3 of the list.**

PHP Script

```
<?php
header('Content-Type: text/plain');

$allTheStates = "Mississippi Alabama Texas Massachusetts Kansas tuxas";

$statesArray = [];

$states1 = explode(' ', $allTheStates);

$i = 0;

//states that ends in xas
foreach($states1 as $state) {
    if(preg_match( 'xas$/', ($state)))
    {
        $statesArray[$i] = ($state);
        $i = $i + 1;
    }
    print "\n\nThe States that ends in xas:" . $state;
}

//states that begins with k and ends in s
foreach($states1 as $state)
{
    if(preg_match('/^k.*s$/i', ($state)))
```

```

{ $statesArray[$i] = ($state);
$i = $i + 1;
echo "\nThe states that begins with k ans ends in s:" . $state;
}
}

//states that begins with M and ends in s
foreach($states1 as $state) {
if(preg_match('/^M.*s$/', ($state)))
{
$statesArray[$i] = ($state);
$i = $i + 1;
echo "\nThe states that begins with M and ends in s:" . $state;
}
}

//states that ends in a
foreach($states1 as $state) {
if(preg_match('/a$/', ($state)))
{
$statesArray[$i] = ($state);
$i = $i + 1;
echo "\nThe states that ends in a:" . $state;
}
}

//}

foreach( $statesArray as $element => $value ){
print( "\n" . $value." is the element ". $element);
}

?>

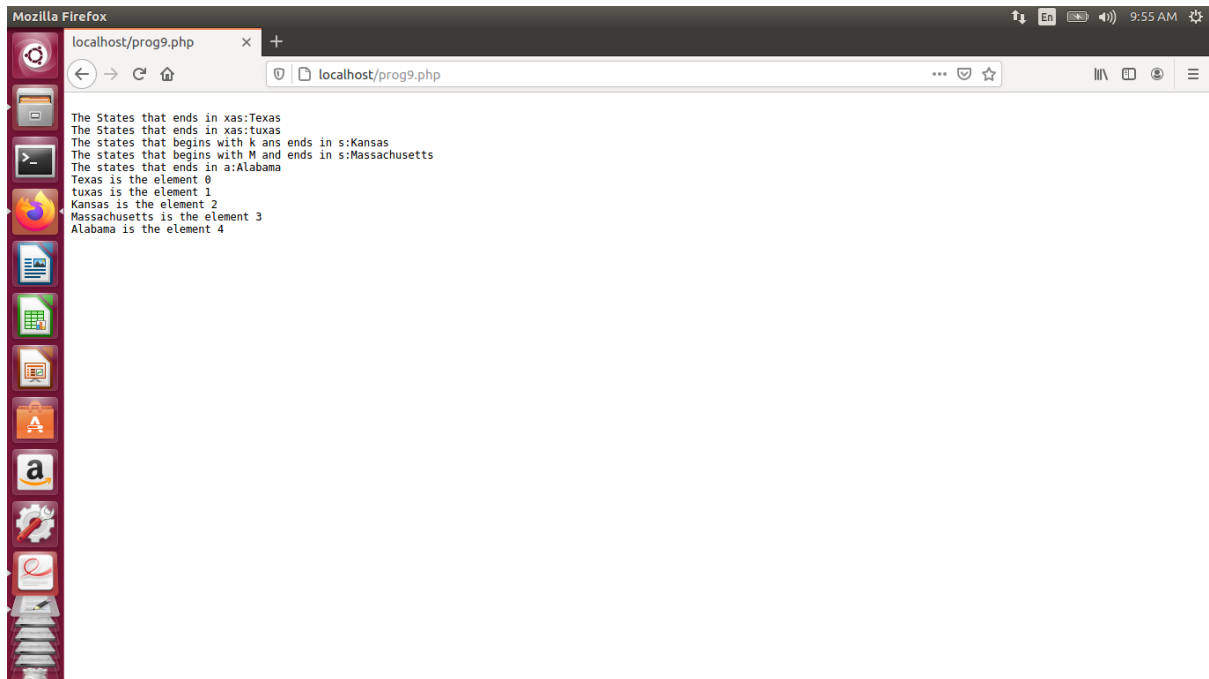
```

Steps for PHP Execution

1. vi prog9.php
2. Type the program

3. Save Program in vi editor Esc->**Shift** + : ->wq
4. Press Y for Yes to Program Save
5. Run the program in Web Browser localhost/prog9.php

Output



10. Write a PHP program to sort the student records which are stored in the database using selection sort.

```
<!DOCTYPE html>
<html>
<head>
    <title>Selection Sort</title>
</head>

<!-- jQuery 3 -->
<script src="jquery.min.js"></script>

<script type="text/javascript">
var globalData=null;
var tempData;
if(tempData===null||tempData===undefined){
    tempData={ };
}

tempData={
    saveRecord:function(){
        var url="ajaxInfo.php";
        var formEQData = new FormData($('#formRecord')[0]);
        formEQData.append("saveRecord","saveRecord");

        $.ajax({
            type:"POST",
            url:url,
            async: false,
            dataType: 'json',
            cache : false,
            processData: false,
            contentType: false,
            data:formEQData,
            success: function(obj) {
                alert(obj.msg);
                tempData.getRecord(); // Calling function to fetch the Record from DB.
            }
        });
    },
    getRecord:function(){
        var url="ajaxInfo.php";
        var myData = {getRecord:'getRecord'};

        $.ajax({
            type:"POST",
            url:url,
            async: false,
            dataType: 'json',
            data:myData,
```

```

success: function(obj) {
    globalData=obj.studentArr; // Assigning to Global Variable

    var content="";
    $('#tableRow').html("");
    for(var i = 0; i<obj.studentArr.length; i++) {

content+='<tr><td>'+obj.studentArr[i].stu_id+'</td><td>'+obj.studentArr[i].stu_name+'</td>'
+'<td>'+obj.studentArr[i].stu_mobile+'</td><td>'+obj.studentArr[i].stu_email+'</td></tr>';
        }
        $('#tableRow').append(content);
    }
    });
},
selectionSort:function(){
    var url="ajaxInfo.php";
    var myData = {selectionSort:'selectionSort'};

$.ajax({
    type:"POST",
    url:url,
    async: false,
    dataType: 'json',
    data:myData,
    success: function(obj) {
        var content="";
        $('#tableRow').html("");

        for(var i = 0; i<obj.sortedArr.length; i++) {
            for(var j = 0; j<globalData.length; j++) {
                if(obj.sortedArr[i]==globalData[j].stu_id){

content+='<tr><td>'+globalData[j].stu_id+'</td><td>'+globalData[j].stu_name+'</td>'
+'<td>'+globalData[j].stu_mobile+'</td><td>'+globalData[j].stu_email+'</td></tr>';
                    }

                }
            }
            $('#tableRow').append(content);

        }
    });
}
};

$(document).ready(function() {
    tempData.getRecord();
});

```



```

</script>
<body>

    <center>
        <h1> Add Student Record </h1>
        <form id="formRecord">
            <table border="0">
                <tr>
                    <td>Name</td>
                    <td><input type="text" name="name" id="name"></td>
                </tr>
                <tr>
                    <td>Mobile Number</td>
                    <td><input type="number" name="mobile" id="mobile"></td>
                </tr>
                <tr>
                    <td>Email ID</td>
                    <td><input type="email" name="email" id="email"></td> </tr>
            </table><br>

            <button type="button" onclick="tempData.saveRecord();" style="width:150px;">Add Student</button>

        </form>
    <br/><br/>

    <div style="overflow-x: scroll;height: 600px;width:60%;">

        <button type="button" style="width:150px;float: right;" onclick="tempData.selectionSort();" >
        Selection Sort</button>

    <br/><br/>
    <table border=1 style="width:100%;">
        <thead>
            <tr style="text-align: left;">
                <th>Student ID</th>
                <th>Name</th>
                <th>Mobile</th>
                <th>Email</th>
            </tr>
        </thead>
        <tbody id="tableRow">
        </tbody>
    </table>
</div>
    </center>

</body>

```

</html>

<?php

```
require_once('db.php');
```

```
/* Fetching the initial data */
```

```
/*$Query = 'select * from info';
```

```
$fetchRec = mysqli_query($con,$Query) or die(mysqli_error());*/
```

```
/* Add the record to DATABASE */
```

```
if(isset($_POST['saveRecord']))
```

```
{
```

```
    $name = $_POST['name'];
```

```
    $mobile = $_POST['mobile'];
```

```
    $email = $_POST['email'];
```

```
    if($name != "" && $mobile != "" && $email != "")
```

```
    {
```

```
        $stu_id = rand(0,99999); //random number generation
```

```
        $Query = "insert into info(stu_id,stu_name,stu_mobile,stu_email)
```

```
        values($stu_id,$name,$mobile,$email)";
```

```
        mysqli_query($con,$Query) or die(mysqli_error());
```

```
        $msg = 'Record Saved Successfully !';
```

```
    }
```

```
    else{
```

```
        $msg = "Text Field is empty !";
```

```
    }
```

```
    $status['msg'] = $msg;
```

```
    echo json_encode($status);
```

```
    mysqli_close($con);
```

```
}
```

```
/* read all studrnt data from DATABASE */
```

```
if(isset($_POST['getRecord']))
```

```
{
```

```
    $sql = "select * from info";
```

```
    $fetchRec = mysqli_query($con,$sql) or
```

```
    die(mysqli_error()); while
```

```
    ($row=mysqli_fetch_array($fetchRec)) {
```

```
        $stu_id = $row['stu_id'];
```

```
        $stu_name = $row['stu_name'];
```

```
        $stu_mobile = $row['stu_mobile'];
```

```
        $stu_email = $row['stu_email'];
```

```
        $studentArr[]=array('stu_id'=>$stu_id,
```

```

        'stu_name' =>$stu_name,
        'stu_mobile' =>$stu_mobile,
        'stu_email' =>$stu_email
    );
}

$status['studentArr'] = $studentArr;
echo json_encode($status);
mysqli_close($con);

}

/* read data from DATABASE */
if(isset($_POST['selectionSort']))
{
    $sql = "select * from info";
    $fetchRec = mysqli_query($con,$sql) or
    die(mysqli_error()); while
    ($row=mysqli_fetch_array($fetchRec)) {
        $getStuID[] = $row['stu_id'];
    }
    $selectionArr = selection_sort($getStuID); // calling selection Sort function

    $status['sortedArr'] = $selectionArr;
    echo json_encode($status);
    mysqli_close($con);
}

function selection_sort($data)
{
    for($i=0; $i<count($data)-1; $i++) {
        $min = $i;
        for($j=$i+1; $j<count($data); $j++) {
            if ($data[$j]<$data[$min]) {
                $min = $j;
            }
        }
        $data = swap_positions($data, $i, $min);
    }
    return $data;
}

function swap_positions($data1, $left, $right) {
    $backup_old_data_right_value = $data1[$right];
    $data1[$right] = $data1[$left];
    $data1[$left] = $backup_old_data_right_value;
    return $data1;
}
?>

```

```

<?php
error_reporting(0);
session_start();

$con =
mysqli_connect("localhost","root","","student_db"); if
(mysqli_connect_errno()) {
    echo "Failed to connect to MySQL: " . mysqli_connect_error();
}
?>

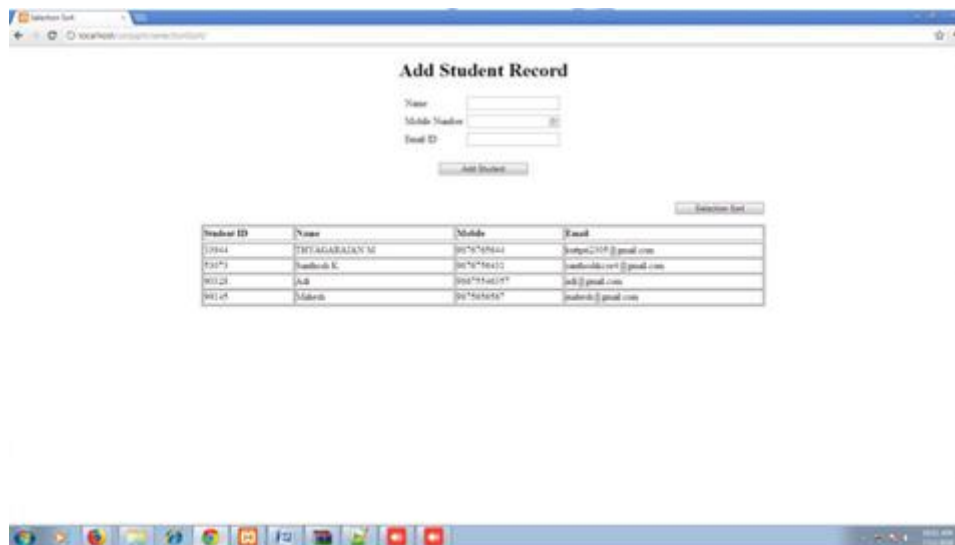
```

Steps to run

1. Create Database in phpmyadmin. [refer student_db.sql file]
2. run file browser.

1. ajaxInfo.php - Database related file [Save, Read, Selection Sort]
2. db.php - connect to database.
3. index.php - Home file [Ajax, JSon,]
4. jquery.min.js - [it will helps to run the ajax]

Output



The screenshot shows a web browser window with a form titled "Add Student Record". The form has three input fields: "Name", "Mobile Number", and "Email ID", each followed by a button. Below the form is a table with four columns: "Student ID", "Name", "Mobile", and "Email". The table contains four rows of data. At the bottom of the browser window, there is a taskbar with various application icons.

| Student ID | Name | Mobile | Email |
|------------|----------------|------------|------------------------|
| 12345 | THY AGARADAN M | 9876543210 | thyagaradanm@gmail.com |
| 67890 | Radhika K. | 9876543210 | radhikak@gmail.com |
| 90123 | Ad | 9876543210 | ad@gmail.com |
| 34567 | Mahesh | 9876543210 | mahesh@gmail.com |

