

Date: 8/02/23

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Course Code and Name: 2CSDE69 LAMP Technology

Practical No. 2

AIM: Implementation of Various functions in PHP

Methodology followed:

Practice Problems:

Printing variables:

```
<?php
    $n1=4;
    $n2=6;
    $n3=2;
    $n4=1;
    $n5=3;
    $a=$n1+$n2;
    $b=$n3+$n4;
    $c=$n4 + $n5;
    echo $a." ".$b." ".$c;
```

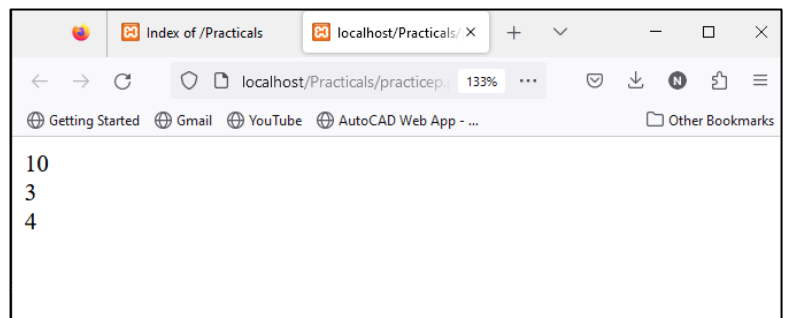
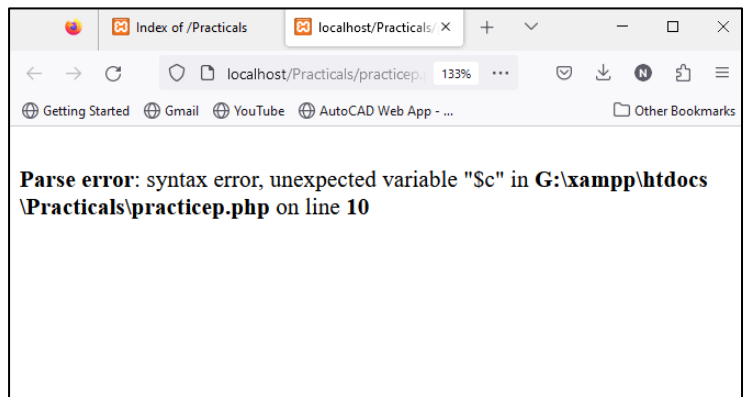
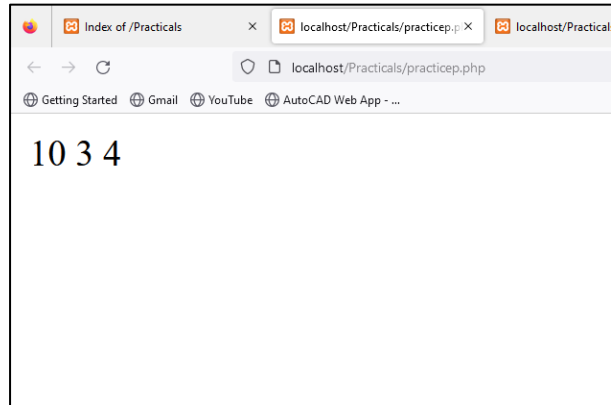
?>

```
<?php
    $n1=4;
    $n2=6;
    $n3=2;
    $n4=1;
    $n5=3;
    $a=$n1+$n2;
    $b=$n3+$n4
    $c=$n4 + $n5;
    echo $a." ".$b." ".$c;
```

?>

```
<?php
    $n1=4;
    $n2=6;
    $n3=2;
    $n4=1;
    $n5=3;
    $a=$n1+$n2;
    $b=$n3+$n4;
    $c=$n4 + $n5
    echo"$a<br>";
    echo"$b<br>";
    echo"$c<br>"
```

?>



PHP Datatypes

```
<?php
    $a=10;
    var_dump($a);
    echo"<br>";
    $b=2.5;
    var_dump($b);
    echo"<br>";
    $c="Dhyan";
    var_dump($c);
    echo"<br>";
    $d= true;
    var_dump($d);
    echo"<br>";
    $arr =
    array("LAMP","CC","IRS");
    var_dump($arr);
    echo"<br>";
    $e=NULL;
    var_dump($e);
```

?>

PHP Variables:

1) Global Scope:

```
<?php
    $a = 5; // global scope
    $b=10;

    function my() {

        // global $a,$b;
        $c = $a + $b;

        echo "<p> $c</p>";
    }
    my();
```

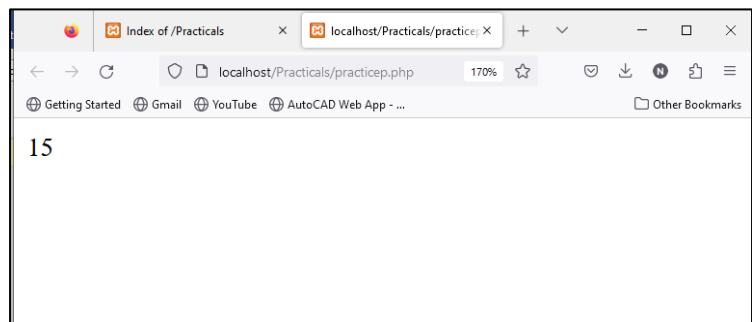
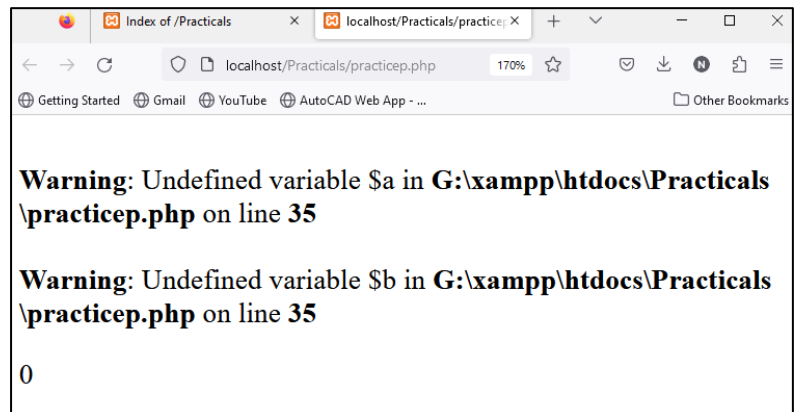
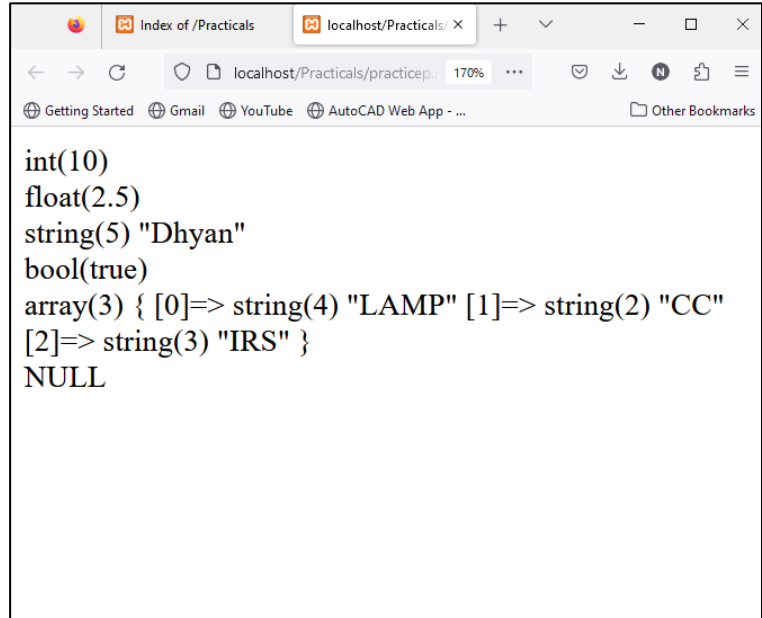
?>

Now using global variable

```
<?php
    $a = 5; // global scope
    $b=10;
    function my() {
        global $a,$b;
        $c = $a + $b;

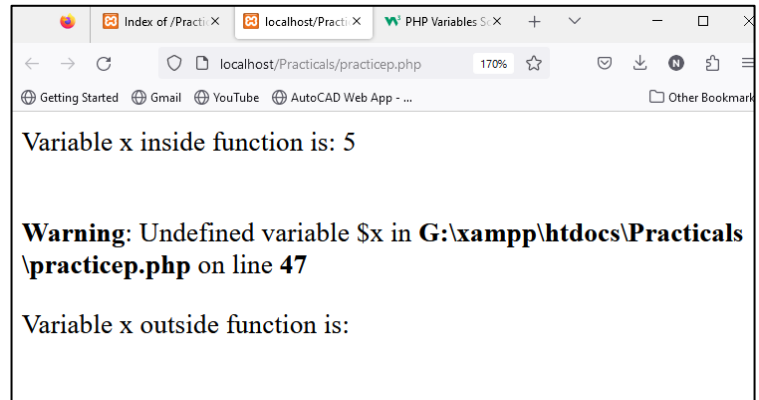
        echo "<p> $c</p>";
    }
    my();
```

?>



2) Local Variable:

```
<?php
function myTest() {
    $x = 5; // local scope
    echo "<p>Variable x inside
function is: $x</p>";
}
myTest();
echo "<p>Variable x outside
function is: $x</p>";
?>
```

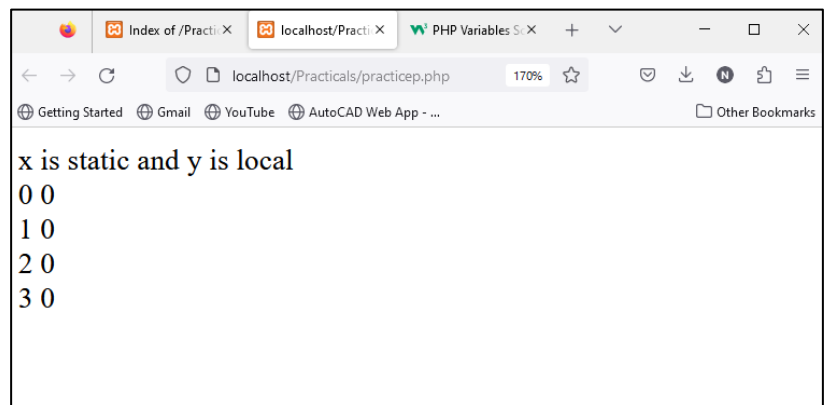


3) Static Variable:

```
<?php
echo "x is static and y is
local<br>";
function p1(){
    static $x=0;
    $y=0;

    echo $x." ".$y;
    $x++;
    $y++;
}

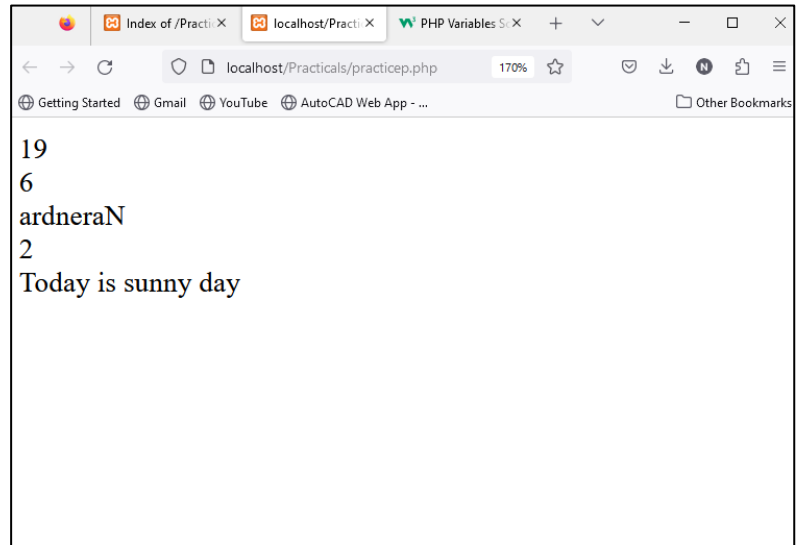
p1();
echo"<br>";
p1();
echo"<br>";
p1();
echo"<br>";
p1();
echo"<br>";
?>
```



PHP String Functions:

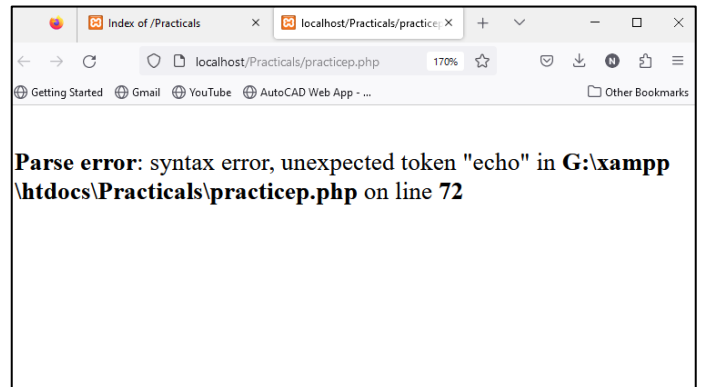
```
<?php
$str1="Today is gloomy day";
$str2="hello world!Hi hi.hello?a";
$str3="Narendra";
$str4="";

echo strlen($str1);
echo "<br>";
echo str_word_count($str2);
echo "<br>";
echo strrev($str3);
echo "<br>";
echo strpos($str3,"r");
echo "<br>";
echo
str_replace("gloomy","sunny",$str1);
?>
```

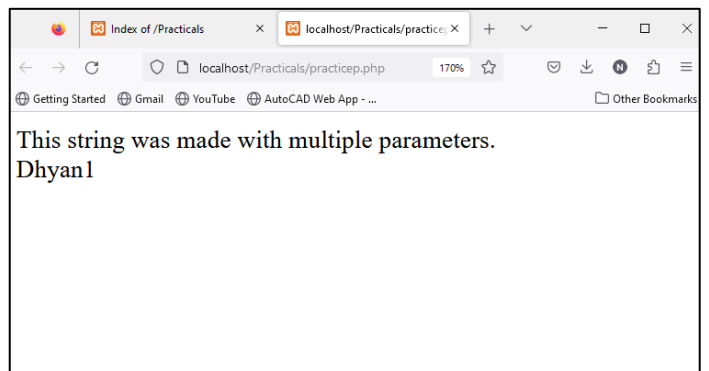


Echo vs Print

```
<?php
echo "This ", "string ", "was ",
"made ", "with multiple
parameters.";
echo "<br>";
print echo "This ", "string ", "was ",
"made ", "with multiple
parameters.";
echo "<br>";
echo print "Dhyan";
?>
```



```
<?php
echo "This ", "string ", "was ",
"made ", "with multiple
parameters.";
echo "<br>";
print echo "This ", "string ", "was ",
"made ", "with multiple
parameters.";
echo "<br>";
echo print "Dhyan";
?>
```



Functions in PHP

```
<?php
function addNO($a,$b){
    $c=$a + $b;
    return $c;
}

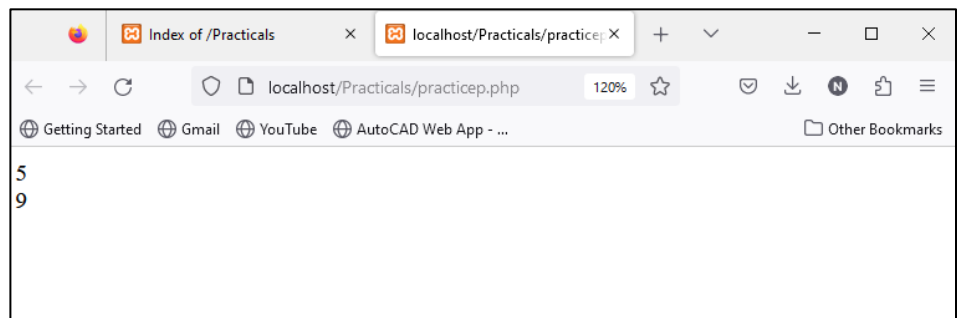
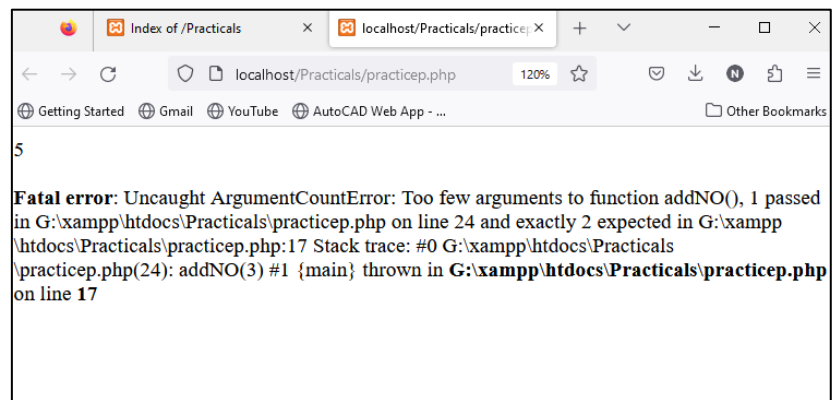
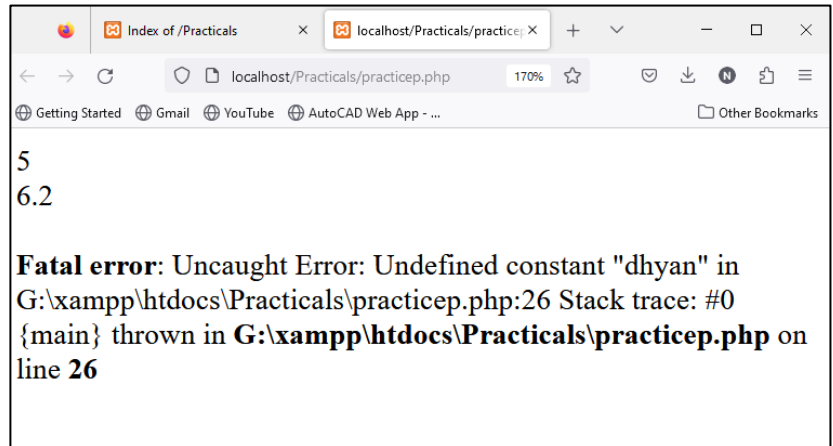
print addNO(3,2);
echo "<br>";
echo addNO(3.4,2.8);
echo "<br>";
echo addNO(3.4,dhyan);
?>
```

```
<?php
function addNO($a,$b){
    $c=$a + $b;
    return $c;
}

print addNO(3,2);
echo "<br>";
echo addNO(3);
echo "<br>";
echo addNO(3,8);
?>
```

```
<?php
function addNO($a,$b){
    $c=$a + $b;
    return $c;
}

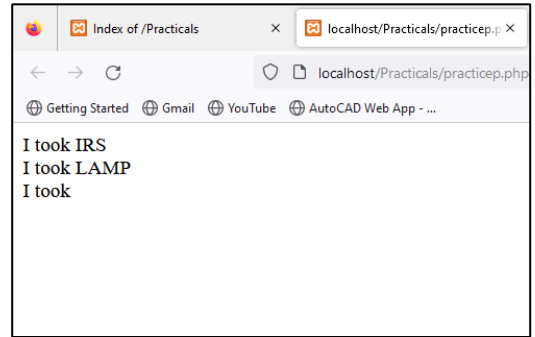
print addNO(3,2);
echo "<br>";
echo addNO(3,6,9);
?>
```



Default Arguments in PHP

```
<?php
function mycourse($c="LAMP"){
    echo "I took $c<br/>";
}
mycourse("IRS");
mycourse();
mycourse("");

?>
```



Arrays in PHP

```
<?php
echo "Basic array<br>";
$season=array("summer","winter","spring","autumn");

function sdisplay(&$cars) {
    $clength = count($cars);
    for($x = 0; $x < $clength; $x++) {
        echo $cars[$x];
        echo "<br>";
    }
}

sdisplay($season);

$noOfElements = count($season);
echo "Total No. of elements : ".$noOfElements;
echo"<br><br>";

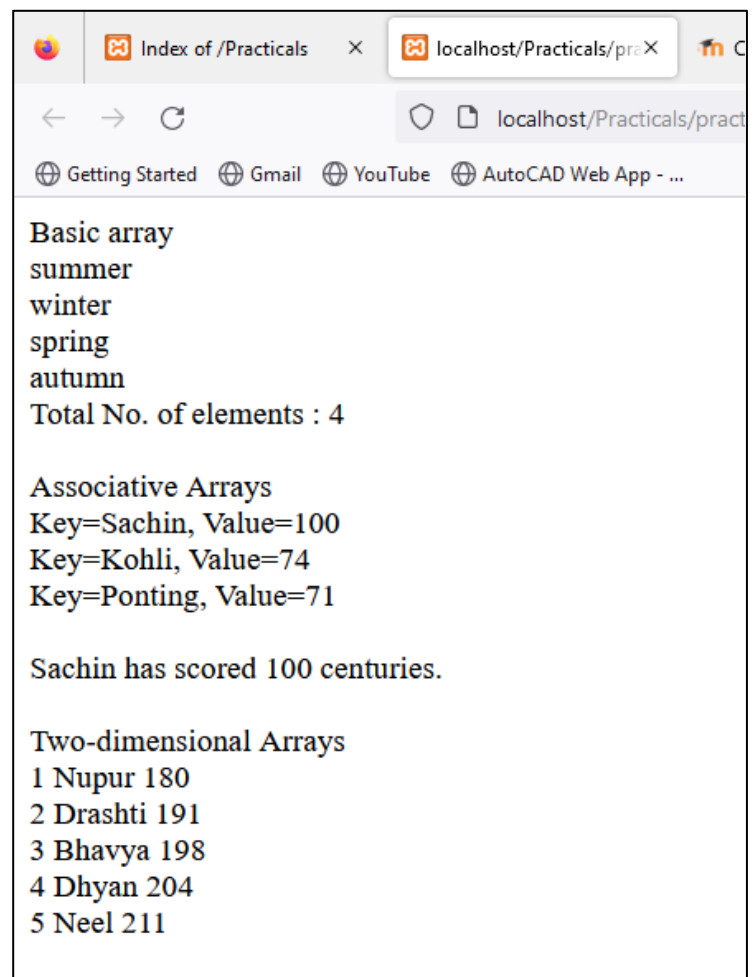
echo "Associative Arrays<br>";
$cent = array("Sachin"=>"100", "Kohli"=>"74",
"Ponting"=>"71");

foreach($cent as $x => $x_value) {
    echo "Key=" . $x . ", Value=" . $x_value;
    echo "<br>";
}
echo "<br>Sachin has scored " . $cent['Sachin'] . "
centuries.";
echo"<br><br>";

echo "Two-dimensional Arrays<br>";
$roll= array
(
    array(1,"Nupur",180),
    array(2,"Drashti",191),
    array(3,"Bhavya",198),
    array(4,"Dhyan",204),
    array(5,"Neel",211)
);

for($row = 0; $row < 5; $row++) {
    for ($col = 0; $col < 3; $col++) {
        echo $roll[$row][$col]. " ";
    }
    echo "<br/>";
}

?>
```



Sorting Arrays:

```
<?php
    echo "<b>Basic array</b><br>";
    echo "Sort Array in ascending Order - sort()<br>";
    $season=array("summer","winter","spring","autumn");
    sort($season);

    function sdisplay(&$cars) {
        $clength = count($cars);
        for($x = 0; $x < $clength; $x++) {
            echo $cars[$x];
            echo "<br>";
        }
    }
    sdisplay($season);
    echo "Sort Array in Descending Order - rsort()<br>";
    rsort($season);
    sdisplay($season);
    echo"<br><br>";

    echo "Associative Arrays<br>";
    $scnt = array("Sachin"=>"100", "Kohli"=>"74",
    "Ponting"=>"71");
    function adisplay(&$scnt){
        foreach($scnt as $x => $x_value) {
            echo "Player: " . $x . ", Centuries = " . $x_value;
            echo "<br>";
        }
    }
    adisplay($scnt);

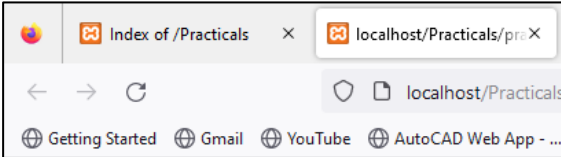
    echo "<b>asort()</b><br>";
    $age = array("Peter"=>"35", "Ben"=>"37",
    "Joe"=>"43");
    asort($scnt);
    adisplay($scnt);
    echo"<br>";

    echo "<b>ksort()</b><br>";
    ksort($scnt);
    adisplay($scnt);
    echo"<br>";

    echo "<b>arsort()</b><br>";
    arsort($scnt);
    adisplay($scnt);
    echo"<br>";

    echo "<b>krsort()</b><br>";
    krsort($scnt);
    adisplay($scnt);
    echo"<br>";
```

?>



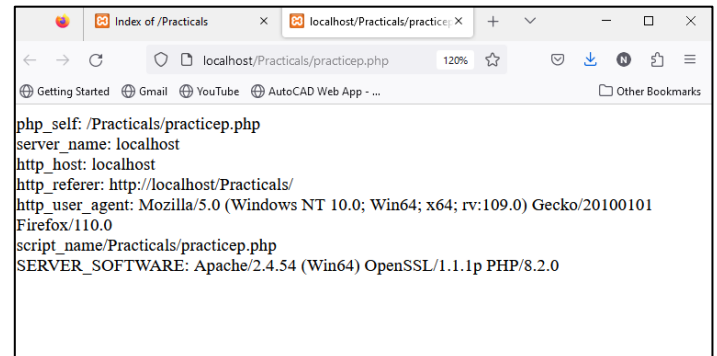
Basic array
Sort Array in ascending Order - sort()
autumn
spring
summer
winter
Sort Array in Descending Order - rsort()
winter
summer
spring
autumn

Associative Arrays
Player: Sachin, Centuries = 100
Player: Kohli, Centuries = 74
Player: Ponting, Centuries = 71
asort()
Player: Ponting, Centuries = 71
Player: Kohli, Centuries = 74
Player: Sachin, Centuries = 100
ksort()
Player: Kohli, Centuries = 74
Player: Ponting, Centuries = 71
Player: Sachin, Centuries = 100
arsort()
Player: Sachin, Centuries = 100
Player: Kohli, Centuries = 74
Player: Ponting, Centuries = 71
krsort()
Player: Sachin, Centuries = 100
Player: Ponting, Centuries = 71
Player: Kohli, Centuries = 74

Superglobals:

```
<?php
    echo "php_self: " . $_SERVER['PHP_SELF'];
    echo "<br>";
    echo "server_name: " . $_SERVER['SERVER_NAME'];
    echo "<br>";
    echo "http_host: " . $_SERVER['HTTP_HOST'];
    echo "<br>";
    echo "http_referer: " . $_SERVER['HTTP_REFERER'];
    echo "<br>";
    echo "http_user_agent: "
    . $_SERVER['HTTP_USER_AGENT'];
    echo "<br>";
    echo "script_name" . $_SERVER['SCRIPT_NAME'];
    echo "<br>";
    echo "SERVER_SOFTWARE: "
    . $_SERVER['SERVER_SOFTWARE'];
    echo "<br>";
```

?>



Practical 2A:

A) Write a PHP function to check whether entered number is Harshad number or not. Harshad Number has following property: A number that is divisible by the sum of its own digits. For example, 1729 is a Harshad number because $1 + 7 + 2 + 9 = 19$ and $1729 = 19 \times 91$. More generally, a Harshad number in a given number base, is an integer that is divisible by the sum of its digits when written in that base.

Code:

```
<!DOCTYPE html>
<html>
  <body>
    <h2 align="center"> Practical 2A</h2>
    <br><br>
    <form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
      <center>Enter a number: <input type="text" name="fname">
      <br><br>
      <input type="submit"></center>
    </form>

    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
      // collect value of input field
      $n= $_POST['fname'];
      echo "<br>";
      echo "<center>Entered Number is ".$n."</center><br>";

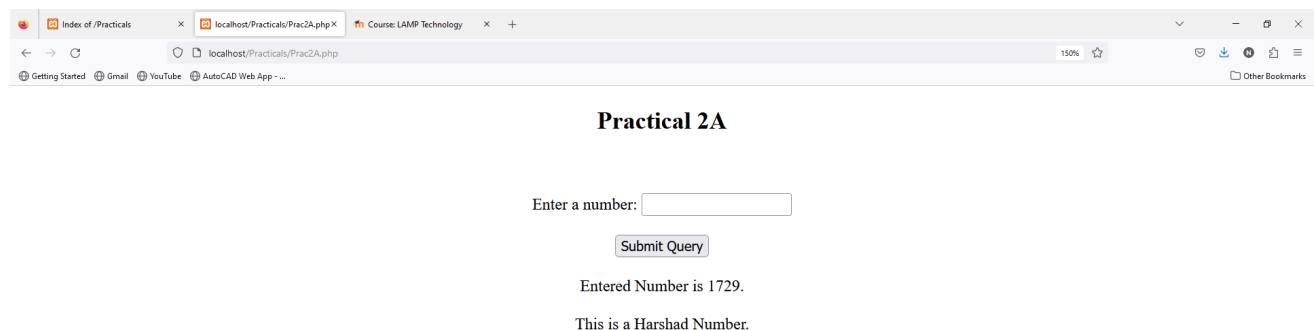
      function harshad(int $n){
        $sum=0;
        $temp=$n;

        while($n>0){
          $rem= $n%10;
          $n= $n/10;
          $sum= $sum+ $rem;
        }

        if($temp % $sum==0){
          echo "<center>This is a Harshad Number.</center>";
        }
        else {
          echo "</center>This is not a Harshad Number.</center><br>";
        }
      }

      echo harshad($n);
    }
    ?>
  </body>
</html>
```

Output:



(B) Write a PHP function that check whether user entered number is special number or not. For example, Consider the number is 59. First, find the sum of all digits (5+9=14). Second, find multiplication of all digits (5*9=45). Then find addition of sum and multiplication of alldigits (14+45=59). If it is same as number itself, than it is a special number.

Code:

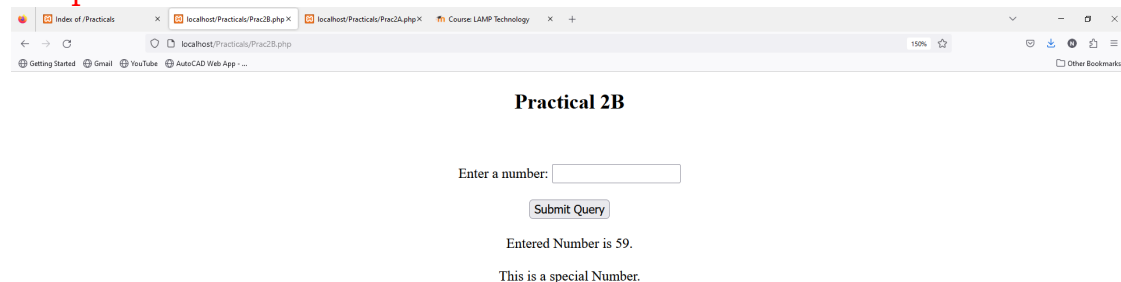
```
<!DOCTYPE html>
<html>
  <body>
    <h2 align="center"> Practical 2B</h2>
    <br><br>
    <form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
      <center>Enter a number: <input type="text" name="fname">
      <br><br>
      <input type="submit"></center>
    </form>

    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
      // collect value of input field
      $n= $_POST['fname'];
      echo "<br>";
      echo "<center>Entered Number is ".$n."</center><br>";
      function specialno(int $n){
        $sum=0;
        $temp=$n;
        $mul=1;

        while($n>0){
          $rem= $n%10;
          $n= $n/10;
          $sum= $sum+ $rem;
          $mul=$mul*$rem;
          $n=(int)$n;
        }
        $sum2=$sum + $mul;
        // echo "<br>".$sum2;
        if($sum2==$temp){
          print "<center>This is a special Number.</center>";
        }
        else{
          print "<center>This is not a special Number.</center>";
        }
      }

      print specialno($n);
    }
    ?>
  </body>
</html>
```

Output:



(C) Write a PHP function that check whether number Kaprekar Number or not. Consider an n-digit number k. Square it and add the right n digits to the left n or n-1 digits. If the resultant sum is k, then k is called a Kaprekar number. For example, 9 is a Kaprekar number since

Code:

```
<!DOCTYPE html>
<html>
  <body>
    <h2 align="center"> Practical 2B</h2>
    <br><br>
    <form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
      <center>Enter a number: <input type="text" name="fname">
      <br><br>
      <input type="submit"></center>
    </form>

    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
      // collect value of input field
      $n= $_POST['fname'];
      echo "<br>";
      echo "<center>Entered Number is ".$n."</center><br>";
      function kaprekar($n){
        $x=$n;
        $sstr=strval($n);
        $count=strlen($sstr);

        $x=$n*$n;
        $count1=strlen(strval($x));

        for($j=$count1-$count;$j>=1;$j--){
          $div=1;

          for($i=1;$i<=$count;$i++){
            $div*=10;
          }

          $x=$n*$n;
          $sstr=strval($x);
          $fstr="";

          for($i=0;$i<$count1-$count;$i++){
            $fstr=$sstr[$i];
          }
          $fs=(int)$fstr;

          $sum=$fs+($x%$div);

          if($sum==$n){
            return true;
          }

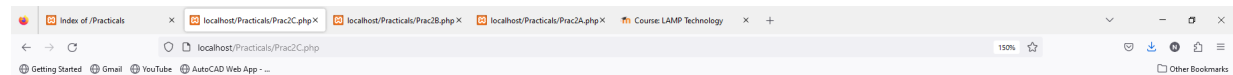
          $count++;
        }

        return false;
      }

      $a=kaprekar($n);
```

```
        if($a==$n){
            echo "<center>$n IS KAPREKAR NUMBER</center>";
        }
        else{
            echo "<center>$n IS NOT A KAPREKAR NUMBER</center>";
        }
    }
    ?>
</body>
</html>
```

Output:



Practical 2C

Enter a number:

Entered Number is 857143.

857143 IS KAPREKAR NUMBER

(D) Write a PHP function to check whether number is Automorphic Number or not. Automorphic numbers are numbers of "n" digits whose squares end in the number itself. For instance, the square of 1 is 1; the square of 5 is 25; the square of 6 is 36; the square of 25 is 625.

Code:

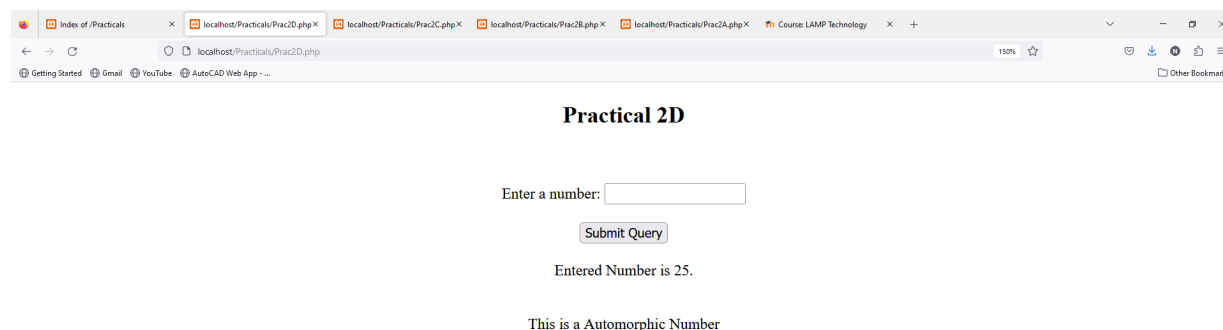
```
<!DOCTYPE html>
<html>
  <body>
    <h2 align="center"> Practical 2D</h2>
    <br><br>
    <form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
      <center>Enter a number: <input type="text" name="fname">
      <br><br>
      <input type="submit"></center>
    </form>

    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
      // collect value of input field
      $n= $_POST['fname'];
      echo "<br>";
      echo "<center>Entered Number is ".$n."</center><br>";
      function automorphic(int &$m){
        $sq=$m*$m;
        $str = strval($m);
        $strq=strval($sq);
        $len= strlen($str);
        $lensq=strlen($strq);

        $last=substr($strq,-1*($len));

        if($last==$m){
          print "<br><center>This is a Automorphic Number</center>";
        }
        else{
          print "<center>This is not a Automorphic Number</center>";
        }
      }
      print automorphic($n);
    }
    ?>
  </body>
</html>
```

Output:



Conclusion: We implemented various functions in php using function and string commands.