**Aim:** Write a function to reverse a string

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. LAMP Server with PHP

## Program:

<?php

function Reverse($str){ //creating a function Reverse and passing $str as parameter return strrev($str); //used strrev built-in function to get reverse of string

}

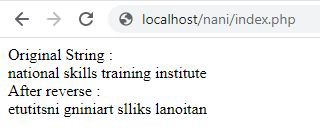
$str = "national skills training institute"; //input for $str as a string

echo "Original String :<br>"; // Display original string echo $str."<br>";

echo "After reverse : <br>"; //Display reverse of string echo Reverse($str);

?>

## Output/Results snippet:



**References**:

1. https://[www.geeksforgeeks.org/php-reverse-string/](http://www.geeksforgeeks.org/php-reverse-string/)

**Aim:** Write a PHP function that checks whether a passed string is a palindrome or not? **Learning outcome**: Able to design and develop dynamic websites with PHP. **Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. LAMP Server with PHP

## Program:

<?php

function check\_palindrome($string) //creating a function check\_palindrome

{

if ($string == strrev($string)) //comparing string with reverse of same string return 1; //return 1 if reverse and original string is same else

return 0; //return 0 if reverse and original strings are not same

}

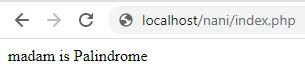
$string="madam"; //taking example string as madam if(check\_palindrome($string)==1) //checking palindrome or not echo "$string is Palindrome"; //display the output

else

echo "$string is Not a palindrome";

?>

## Output/Results snippet:



**References**:

1. https://[www.geeksforgeeks.org/php-palindrome-check/](http://www.geeksforgeeks.org/php-palindrome-check/)

**Aim:** Write a simple PHP class which displays the given string

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. LAMP Server with PHP

## Program:

<?php

class MyClass { //creating a class ‘MyClass’ class name public function construct() //creating a constructor for class

{

echo 'MyClass class has initialized !'."\n";

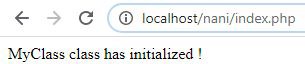
}

}

$userclass = new MyClass; //creating object for class

?>

## Output/Results snippet:



**References**:

1. https://[www.w3resource.com/php-exercises/php-class-exercise-1.php](http://www.w3resource.com/php-exercises/php-class-exercise-1.php)

**Aim:** Write a PHP Calculator class which will accept two values as arguments, then add them, subtract them, multiply them together, or divide them on request

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 3 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. LAMP Server with PHP

## Program:

<?php

class MyCalculator { //class name MyCalculator

private $\_fval, $\_sval; //Data members declared as private

public function construct( $fval, $sval ) { //passing parameters to the function

$this->\_fval = $fval; //initializing the data members

$this->\_sval = $sval; //initializing the data members

}

public function add() { // creating a add function return $this->\_fval + $this->\_sval; //adding the values

}

public function subtract() { //creating the subtract function return $this->\_fval - $this->\_sval; //subtraction is done here

}

public function multiply() { //creating the multiply function return $this->\_fval \* $this->\_sval; //multiplication is done here

}

public function divide() { //creating the divide function return $this->\_fval / $this->\_sval; //division is done here

}}

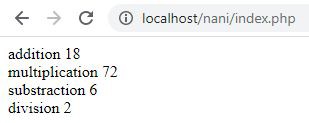
$mycalc = new MyCalculator(12, 6); //passing the parameter values to the function 12,6 echo "addition ",$mycalc-> add()."<br>"; // Displays addition 12+6=18

echo "multiplication ",$mycalc-> multiply()."<br>"; // Displays multiplication 12\*6=72 echo "substraction ",$mycalc-> subtract()."<br>"; // Displays subtraction 12-6=6

echo "division ",$mycalc-> divide(); // Displays division 12/6=2

?>

## Output/Results snippet:



**References**:

1. https://[www.w3resource.com/php-exercises/php-class-exercise-6.php](http://www.w3resource.com/php-exercises/php-class-exercise-6.php)

# Activity

**Aim:** Write a PHP script to: - a) transform a string all uppercase letters. b) transform a string all lowercase letters. c) make a string's first character uppercase. d) make a string's first character of all the words uppercase.

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 2 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<?php

//strtoupper is in-built function used for to make uppercase letters print(strtoupper("all uppercase<br>"))."\n";

//strtolower is in-built function used for to make all into lower letters print(strtolower("all lowecase<br>"))."\n";

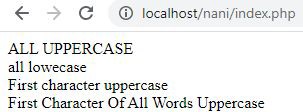
// ucfirst is in-built function used for to make first character in a statement as Uppercase print(ucfirst("first character uppercase<br>"))."\n";

// ucwords is in-built function used for to make first character of every word in a sentence as Uppercase

print(ucwords("first character of all words uppercase"))."\n";

?>

## Output/Results snippet:



**References**:

1. https://[www.w3resource.com/php-exercises/php-string-exercise-1.php](http://www.w3resource.com/php-exercises/php-string-exercise-1.php)

# Activity

**Aim:** Create a form in PHP and apply validations.

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 2 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE HTML>

<html>

<head>

</head>

<body>

<?php

// define variables and set to empty values

$name = $email = $gender = $comment = $website = "";

if ($\_SERVER["REQUEST\_METHOD"] == "POST") {

$name = test\_input($\_POST["name"]);

$email = test\_input($\_POST["email"]);

$website = test\_input($\_POST["website"]);

$comment = test\_input($\_POST["comment"]);

$gender = test\_input($\_POST["gender"]);

}

function test\_input($data) {

$data = trim($data);

$data = stripslashes($data);

$data = htmlspecialchars($data);

return $data;

}

?>

<h2>PHP Form Validation Example</h2>

<form method="post" action="<?php echo htmlspecialchars($\_SERVER["PHP\_SELF"]);?>">

Name: <input type="text" name="name">

<br><br>

E-mail: <input type="text" name="email">

<br><br>

Website: <input type="text" name="website">

<br><br>

Comment: <textarea name="comment" rows="5" cols="40"></textarea>

<br><br>

Gender:

<input type="radio" name="gender" value="female">Female

<input type="radio" name="gender" value="male">Male

<input type="radio" name="gender" value="other">Other

<br><br>

<input type="submit" name="submit" value="Submit">

</form>

<?php

echo "<h2>Your Input:</h2>";

echo $name;

echo "<br>";

echo $email;

echo "<br>";

echo $website;

echo "<br>";

echo $comment;

echo "<br>";

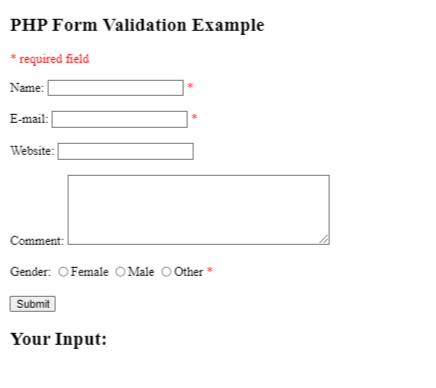
echo $gender;

?>

</body>

</html>

## Output/Results snippet:



**References**:

1. <https://www.w3schools.com/php/php_form_validation.asp>

# Activity

**Aim:** Create a date and time from a number of parameters in mktime().

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<html>

<body>

<?php

// Prints: October 3, 1975 was on a Friday

echo "Oct 3, 1975 was on a ".date("l", mktime(0,0,0,10,3,1975)) . "<br><br>";

//The mktime() function is useful for doing date arithmetic and validation.

//It will automatically calculate the correct value for out-of-range input:

echo date("M-d-Y",mktime(0,0,0,12,36,2001)) . "<br>";

echo date("M-d-Y",mktime(0,0,0,14,1,2001)) . "<br>";

echo date("M-d-Y",mktime(0,0,0,1,1,2001)) . "<br>";

echo date("M-d-Y",mktime(0,0,0,1,1,99)) . "<br>";

?>

</body>

</html>

## Output/Results snippet:

Oct 3, 1975 was on a Friday

Jan-05-2002

Feb-01-2002

Jan-01-2001

Jan-01-1999

**References:**

1. <https://www.w3schools.com/php/func_date_mktime.asp>

# Activity

**Aim:** Create a date and time from the strtotime() function

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<html>

<body>

<?php

echo(strtotime("now") . "<br>");

echo(strtotime("3 October 2005") . "<br>");

echo(strtotime("+5 hours") . "<br>");

echo(strtotime("+1 week") . "<br>");

echo(strtotime("+1 week 3 days 7 hours 5 seconds") . "<br>");

echo(strtotime("next Monday") . "<br>");

echo(strtotime("last Sunday"));

?>

</body>

</html>

## Output/Results snippet:

1589972726

1128297600

1589990726

1590577526

1590861931

1590364800

1589673600

**References:**

1. <https://www.w3schools.com/php/func_date_strtotime.asp>

# Activity

**Aim:** Output the dates for the next six Saturdays

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<html>

<body>

<?php

$startdate=strtotime("Saturday");

$enddate=strtotime("+6 weeks", $startdate);

while ($startdate < $enddate) {

echo date("M d", $startdate) . "<br>";

$startdate = strtotime("+1 week", $startdate);

}

?>

</body>

</html>

## Output/Results snippet:

Mar 12

Mar 19

Mar 26

Apr 02

Apr 09

Apr 16

**References:**

1. <https://www.w3schools.com/php/php_date.asp>

# Activity

**Aim:** Create and retrieve a cookie

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<?php

$cookie\_name = "user";

$cookie\_value = "John Doe";

setcookie($cookie\_name, $cookie\_value, time() + (86400 \* 30), "/"); // 86400 = 1 day

?>

<html>

<body>

<?php

if(!isset($\_COOKIE[$cookie\_name])) {

echo "Cookie named '" . $cookie\_name . "' is not set!";

} else {

echo "Cookie '" . $cookie\_name . "' is set!<br>";

echo "Value is: " . $\_COOKIE[$cookie\_name];

}

?>

<p><strong>Note:</strong> You might have to reload the page to see the value of the cookie.</p>

</body>

</html>

## Output/Results snippet:

Cookie named 'user' is not set!

Note: You might have to reload the page to see the value of the cookie.

**References:**

1. <https://www.w3schools.com/php/php_cookies.asp>

# Activity

**Aim:** Modify a cookie value

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<?php

$cookie\_name = "user";

$cookie\_value = "Alex Porter";

setcookie($cookie\_name, $cookie\_value, time() + (86400 \* 30), "/");

?>

<html>

<body>

<?php

if(!isset($\_COOKIE[$cookie\_name])) {

echo "Cookie named '" . $cookie\_name . "' is not set!";

} else {

echo "Cookie '" . $cookie\_name . "' is set!<br>";

echo "Value is: " . $\_COOKIE[$cookie\_name];

}

?>

<p><strong>Note:</strong> You might have to reload the page to see the new value of the cookie.</p>

</body>

</html>

## Output/Results snippet:

## Cookie named 'user' is not set!

## Note: You might have to reload the page to see the new value of the cookie.

**References:**

1. <https://www.w3schools.com/php/php_cookies.asp>

# Activity

**Aim:** Delete a cookie

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

## <!DOCTYPE html>

## <?php

## // set the expiration date to one hour ago

## setcookie("user", "", time() - 3600);

## ?>

## <html>

## <body>

## <?php

## echo "Cookie 'user' is deleted.";

## ?>

## </body>

## </html>

## Output/Results snippet:

Cookie 'user' is deleted.

**References:**

1. <https://www.w3schools.com/php/php_cookies.asp>

# Activity

**Aim:** Check if cookies are enabled

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hour

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<?php

setcookie("test\_cookie", "test", time() + 3600, '/');

?>

<html>

<body>

<?php

if(count($\_COOKIE) > 0) {

echo "Cookies are enabled.";

} else {

echo "Cookies are disabled.";

}

?>

</body>

</html>

## Output/Results snippet:

Cookies are enabled.

**References:**

1. <https://www.w3schools.com/php/php_cookies.asp>

# Activity

**Aim:** Select data with MySQLi (Object-oriented)

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 2 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

## <!DOCTYPE html>

## <html>

## <body>

## <?php

## $servername = "localhost";

## $username = "username";

## $password = "password";

## $dbname = "myDB";

## // Create connection

## $conn = new mysqli($servername, $username, $password, $dbname);

## // Check connection

## if ($conn->connect\_error) {

## die("Connection failed: " . $conn->connect\_error);

## }

## $sql = "SELECT id, firstname, lastname FROM MyGuests";

## $result = $conn->query($sql);

## if ($result->num\_rows > 0) {

## // output data of each row

## while($row = $result->fetch\_assoc()) {

## echo "<br> id: ". $row["id"]. " - Name: ". $row["firstname"]. " " . $row["lastname"] . "<br>";

## }

## } else {

## echo "0 results";

## }

## $conn->close();

## ?>

## </body>

## </html>

## Output/Results snippet:

id: 1 - Name: John Doe

id: 2 - Name: Mary Moe

id: 3 - Name: Julie Dooley

**References:**

1. <https://www.w3schools.com/php/php_mysql_select.asp>

# Activity

**Aim:** Select data with MySQLi (Object-oriented) and put result in an HTML table

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 2 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

## <!DOCTYPE html>

## <html>

## <head>

## <style>

## table, th, td {

## border: 1px solid black;

## }

## </style>

## </head>

## <body>

## <?php

## $servername = "localhost";

## $username = "username";

## $password = "password";

## $dbname = "myDB";

## // Create connection

## $conn = new mysqli($servername, $username, $password, $dbname);

## // Check connection

## if ($conn->connect\_error) {

## die("Connection failed: " . $conn->connect\_error);

## }

## $sql = "SELECT id, firstname, lastname FROM MyGuests";

## $result = $conn->query($sql);

## if ($result->num\_rows > 0) {

## echo "<table><tr><th>ID</th><th>Name</th></tr>";

## // output data of each row

## while($row = $result->fetch\_assoc()) {

## echo "<tr><td>" . $row["id"]. "</td><td>" . $row["firstname"]. " " . $row["lastname"]. "</td></tr>";

## }

## echo "</table>";

## } else {

## echo "0 results";

## }

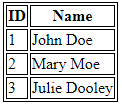
## $conn->close();

## ?>

## </body>

## </html>

## Output/Results snippet:



**References:**

1. <https://www.w3schools.com/php/php_mysql_select.asp>

# Activity

**Aim:** Select data with MySQLi (Procedural)

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 1 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<html>

<body>

<?php

$servername = "localhost";

$username = "username";

$password = "password";

$dbname = "myDB";

// Create connection

$conn = mysqli\_connect($servername, $username, $password, $dbname);

// Check connection

if (!$conn) {

die("Connection failed: " . mysqli\_connect\_error());

}

$sql = "SELECT id, firstname, lastname FROM MyGuests";

$result = mysqli\_query($conn, $sql);

if (mysqli\_num\_rows($result) > 0) {

// output data of each row

while($row = mysqli\_fetch\_assoc($result)) {

echo "id: " . $row["id"]. " - Name: " . $row["firstname"]. " " . $row["lastname"]. "<br>";

}

} else {

echo "0 results";

}

mysqli\_close($conn);

?>

</body>

</html>

## Output/Results snippet:

id: 1 - Name: John Doe

id: 2 - Name: Mary Moe

id: 3 - Name: Julie Dooley

**References:**

1. <https://www.w3schools.com/php/php_mysql_select.asp>

# Activity

**Aim:** Select data with PDO (+Prepared statements)

**Learning outcome**: Able to design and develop dynamic websites with PHP.

**Duration**: 3 hours

## List of Hardware/Software requirements:

1. Laptop/Computer with Linux OS - Ubuntu 18.04 LTS
2. Lamp Server with PHP

## Program:

<!DOCTYPE html>

<html>

<body>

<?php

echo "<table style='border: solid 1px black;'>";

echo "<tr><th>Id</th><th>Firstname</th><th>Lastname</th></tr>";

class TableRows extends RecursiveIteratorIterator {

function \_\_construct($it) {

parent::\_\_construct($it, self::LEAVES\_ONLY);

}

function current() {

return "<td style='width: 150px; border: 1px solid black;'>" . parent::current(). "</td>";

}

function beginChildren() {

echo "<tr>";

}

function endChildren() {

echo "</tr>" . "\n";

}

}

$servername = "localhost";

$username = "username";

$password = "password";

$dbname = "myDBPDO";

try {

$conn = new PDO("mysql:host=$servername;dbname=$dbname", $username, $password);

$conn->setAttribute(PDO::ATTR\_ERRMODE, PDO::ERRMODE\_EXCEPTION);

$stmt = $conn->prepare("SELECT id, firstname, lastname FROM MyGuests");

$stmt->execute();

// set the resulting array to associative

$result = $stmt->setFetchMode(PDO::FETCH\_ASSOC);

foreach(new TableRows(new RecursiveArrayIterator($stmt->fetchAll())) as $k=>$v) {

echo $v;

}

}

catch(PDOException $e) {

echo "Error: " . $e->getMessage();

}

$conn = null;

echo "</table>";

?>

</body>

</html>

## Output/Results snippet:

## 

**References:**

1. <https://www.w3schools.com/php/php_mysql_select.asp>