```php
<!Doctype html>
<html>
<head>
<title>
Largest number
</title>
<body>
<form method="post">
Enter the number 1:
<input type="number" name="num1"><br><br>
Enter the number 2:
<input type="number" name="num2"><br><br>
Enter the number 3:
<input type="number" name="num3"><br>
<input type="submit" value="greatest" name="submit">

</form>
</body>
</html>
<?php
if(isset($_POST["submit"])){
$num1=$_POST['num1'];
$num2=$_POST['num2'];
$num3=$_POST['num3'];
if($num1>$num2 && $num1>$num3){
echo "The greater number is".$num1;
}
else{
if($num2>$num1 && $num2>$num3){
echo "The greater number is".$num2;

}
else{
echo "the greater numbe is".$num3;

}
}

}
?>
```

```php
<!Doctype html>
<html>
<head>
<title>
No. of days in a month
</title>
<body>
<form method="post">
Enter the no. of month:
<input type="number" name="num"><br>
<input type="submit" value="days" name="submit">
</form>
</body>
</html>
<?php
if(isset($_POST["submit"])){
$x=$_POST['num'];
switch($x){

    case 1:
      echo "31 days";
      break;
    case 2:
      echo "28/29 days";
      break;
    case 3:
      echo "31 days";
      break;
    case 4:
      echo "30 days";
      break;
    case 5:
      echo "31 days";
      break;
    case 6:
      echo "30 days" ;
      break;
    case 7:
      echo "31 days";
      break;
    case 8:
      echo "31 days";
      break;
    case 9:
```

```php
        echo"30 days";
        break;
    case 10:
        echo"31 days";
        break;
    case 11:
        echo"30 days";
        break;
    case 12:
        echo "31 days";
        break;
    default:
        echo"Invalid input! Please enter month number between 1-12";

 }

}

?>
```

```php
<!Doctype html>
<html>
<head>
<title>
Switch case drop down list
</title>
<body>
<center>
<h1>
<form method="post">
<select name="dropdown" value="select">
<option value="select">Select</option>
<option value="h">Hindi</option>
<option value="t">Telugu</option>
<option value="e">English</option>
<option value="g">German</option>
<option value="f">French</option>
</select>
<input type="submit" name="submit",value="submit">
</form>
<?php
if($_POST){
$x=$_POST['dropdown'];
switch($x){
case "t": echo "Namaste";break;
case "e": echo "Hello";break;
case "h": echo "Namaskar";break;
case "g": echo "Hallo!";break;
case "f":  echo "Bonjour!";break;
default:echo "don't match";
}

}
?>
</h1>
</center>
</html>
```

```
<!Doctype html>
<html>
<head>
<title>
Sum of odd number
</title>
<body>
<form method="post">
Enter the number:
<input type="number" name="num"><br>
<input type="submit" name="submit" value="submit">
</form>

</body>
</html>
<?php
if(isset($_POST["submit"])){
$num=$_POST["num"];
$sum=0;
$j=1;
for($i=1;$i<=$num;$i++){
$sum+=$j;
$j+=2;
}
echo "The sum of number is".$sum;
}
?>
```

```
<!Doctype html>
<html>
<head>
<title>
</title>
</head>
<body>
<table>
<form method="POST">
<tr>
<td>Enter the number:</td>
<td><input type="text" name="num"></td>
</tr>
<tr>
<td></td>
<td><input type="submit" value="prime" name="submit"></td>
</tr>
</form>
</table>
</body>
</html>
<?php
if(isset($_POST["submit"])){
$num=$_POST['num'];
if($num==2){echo "Prime number";}
if($num>1){
   for($i=2;$i<$num;$i++){
     if($num%$i==0){
        echo "this is not prime ";
     break;
   }
   else{
      echo "this is prime number ";
      break;
   }
}
}
else{
   echo "this is not prime";
}
}
?>
```

```
<!Doctype html>
<html>
<head>
<title>
star pattern
</title>
</head>
<body>
<form method="post">
Enter The number:
<input type="number" name="num"><br>
<input type="submit" name="submit" value="print">
</form>
<?php
if(isset($_POST["submit"])){
$x=$_POST['num'];
for($i=1;$i<=$x;$i++){
for($j=1;$j<=$i;$j++){
echo " * ";
}
echo "<br>";
}
}
?>
</body>
</html>
```

```php
<!Doctype html>
<head>
<title>
factorial of number
</title>
<body>
<form method="post">
Enter the  number :
<input type="number" name="num1"><br><br>
Selected item r:
<input type="number"name="num2"><br>
<input type="submit" value="factorial & C(n,r)" name="submit"><br>
<?php
if(isset($_POST["submit"])){
$n=$_POST['num1'];
$r=$_POST['num2'];
function factorial($n){
$fact=1;
for($i=1;$i<=$n;$i++){
$fact*=$i;
}
return $fact;
}
echo  "The factorial of ".$n. factorial($n)."<br>";
$combination=(factorial($n))/(factorial($r)*factorial($n-$r));
echo "The combination term c(n,r):".$combination;
}
?>
</body>
</html>
```

```
<!Doctype html>
<head>
<title>
rever string
</title>
</head>
<body>
<form method="post">
Enter the string:
<input type="text" name="str"><br>
<input type="submit" name="submit" value="Reverse">
</form>
<?php
if(isset($_POST["submit"])){
$x=$_POST['str'];
$y=strrev($x);
echo $y;
}
?>
</body>
</html>
```

```php
<?php
$x=99;
$y = "99";
if($x==$y){echo "Value are same<br>";}
else{echo "Not same content<br>";}
// Compare $x and $y
if ($x === $y) //identity operator
    echo "Data type and value both are same";
else
    echo "Data type or value are different";

?>
```

```php
<!Doctype html>
<head>
<title>
Practical question10
</title>
</head>
<body>
<form method="post">
Enter the string:
<input type="text" name="str"><br>
<input type="submit" value="CheckString" name="submit">
</form>
<?php
if(isset($_POST["submit"])){
$str1=$_POST['str'];
$str2=strtolower($str1);
echo "<br>";
if(strcmp($str1,$str2)==0){echo "$str1 is in lower case";}
else{echo "$str1 is not in lower case";}
}
?>
</body>
</html>
```

```php
<!Doctype html>
<html>
<body>
<title>
Question 11
</title>
</head>
<body>
<form method="post">
Enter string:
<input type="text" name="str1">
<br><br>
Enter substring:
<input type="text" name="str2"><br>
<input type="submit" name="submit" value="check">
</form>
<?php
if(isset($_POST["submit"])){
$str1=$_POST['str1'];
$str2=$_POST['str2'];
$p=preg_match("/$str2/i",$str1);
if($p){
  echo $str1."   contains substring ".$str2;
}
else{
   echo $str1."does not contain".$str2;
}
}
?>
</body>
</html>
```

```php
<!Doctype html>
<html>
<head>
<title>
remove space
</title>
<body>
<form method="post">
<h1>Remove spaces</h1>
<form method="post">
Enter String:
<input type="text" name="str1">
<br>
<input type="submit" value="Remove spaces" name="submit"><br>
</form>
<?php
if(isset($_POST["submit"])){
$str1=$_POST['str1'];
echo $str1;
echo "<br><br>";
$arr=explode(" ",$str1);
echo implode("",$arr);
echo "<br>";
}
?>
</body>
</html>
```

```
<!Doctype html>
<html>
<head>
<title>
Q13
</title>
<body>
<form method="post">
Enter String:
<input type="text" name="str">
<br>
<input type="submit" name="submit" value="Replace first The">
</form>
<?php
if(isset($_POST["submit"])){
$str1=$_POST['str'];

echo $str1;
echo "<br><br>";
$b=preg_replace('/The/',"That",$str1);
echo "<br>";
echo $b;


}
?>
</body>
</html>
```

```php
<html>
<body>
<h1>Palindrome checking</h1>
<form method="post">
<input type="text" name="str1">
<input type="submit" value="Check" name="submit"><br><br>
</form>
<?php
if(isset($_POST["submit"])){
$str1=$_POST['str1'];
function pcheck($str1){
$str2=strrev($str1);
if(strcmp($str1,$str2)==0)
   return $str1." is a palindrome";
else
    return $str1." is not a palindrome";
}
$p=pcheck($str1);

echo $p;

}
?>
</body>
</html>
```

```
<!DOCTYPE html>
<html>
<body>

<?php
$numbers = array(4, 6, 2, 22, 11);
sort($numbers);

$arrlength = count($numbers);
for($x = 0; $x < $arrlength; $x++) {
  echo $numbers[$x];
  echo "<br>";
}
?>

</body>
</html>
```

```
<html>
<body>
<h1>ARRAY ELEMENTS</h1>
<?php
$color=array("white","Green","Red");
echo "<ul>";
foreach($color as $val){
   echo "<li>$val</li>"."<br>";
}
echo "</ul>";
?>
</body>
</html>
```

```php
<!DOCTYPE html>
<html>
<body>

<?php
$cars = array("Aryan", "Mahendra", "Raj","Rahul","Vishal");
sort($cars);

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

</body>
</html>
```

```php
<!DOCTYPE html>
<html>
<body>

<?php
echo "<h3>Displaying array values</h3>";
$student= array("Maths"=>"90", "physics"=>"93",
"chemistry"=>"96","English"=>99,"computer"=>98);
foreach($student as $subject=>$marks){
  echo $subject."=>".$marks."<br>";
}
ksort($student);
echo "<h3> value after sorting by key</h3>";
foreach($student as $x => $x_value) {
  echo "Key=" . $x . ", Value=" . $x_value;
  echo "<br>";
}
?>

</body>
</html>
```

```php
<?php
$arr= "hello##this##is##php##programming";
$arr2=explode("##",$arr);
for($i=0;$i<count($arr2);$i++){
    echo "Array[$i]"."=>".$arr2[$i]."<br>";
}

?>
```

```php
<!DOCTYPE HTML>

<html>

<head>

  <style>

    .error {color: #FF0000;}

  </style>

</head>

<body>

  <?php

    $nameErr = $emailErr = $addressErr = $ageErr= "";

    $name = $email=$age= $address = "";

    if ($_SERVER["REQUEST_METHOD"] == "POST"){
     if (empty($_POST["name"])) {

       $nameErr = "Please enter a valid name";

    } else {

       $name = test_input($_POST["name"]);

       // check if name only contains letters and whitespace

       if (!preg_match("/^[a-zA-Z-' ]*$/",$name)) {

       $nameErr = "Only letters and white space allowed";

       }

     }

     if (empty($_POST["email"])) {

       $emailErr = "valid Email address";
```

```php
} else {

    $email = test_input($_POST["email"]);

    // check if e-mail address is well-formed

    if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {

    $emailErr = "The email address is incorrect";

    }

}


}

if (empty($_POST["address"])) {

    $addressErr = "Address is empty";

} else {

    $address = test_input($_POST["address"]);
    $str1="Delhi";
    $str2=substr_count($address,$str1);
    if($str2>0){
        $address=test_input($_POST['address']);

    }
    else{
        $addressErr= "Address should contain Delhi";
    }

}

if (empty($_POST["age"])) {

    $ageErr = "Age is empty";

}
else{
        $age=test_input($_POST['age']);
```

```php
        if($age<18){
            $ageErr="Age is less than 18";
        }
        else{
            $age=test_input($_POST['age']);

        }

    }


    function test_input($data) {

    $data = trim($data);

    $data = stripslashes($data);

    $data = htmlspecialchars($data);

    return $data;

    }

?>
```

```html
<h2>PHP Form Validation Example</h2>

<p><span class="error">* required field</span></p>

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

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

```php
<span class="error">* <?php echo $nameErr;?></span>

<br><br>

Age: <input type="number" name="age">

<span class="error">* <?php echo $ageErr;?></span>

<br><br>


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

<span class="error">* <?php echo $emailErr;?></span>

<br><br>


Address: <input type="address" name="address">
<span class="error">*<?php echo $addressErr;?></span>

<br><br>


<input type="submit" name="submit" value="Submit">
</form>
<?php
    echo "<h2> Final Output:</h2>";

    echo $name;

    echo "<br>";

    echo $email;

    echo "<br>";

    echo $age;

    echo "<br>";
```

```php
    echo $address;

    ?>

</body>

</html>
```

login.php

```php
<?php
// Initialize the session
session_start();

// Check if the user is already logged in, if yes then redirect him to welcome page
if(isset($_SESSION["loggedin"]) && $_SESSION["loggedin"] === true){
    header("location: welcome.php");
    exit;
}

// Include config file
require_once "config.php";

// Define variables and initialize with empty values
$username = $password = "";
$username_err = $password_err = $login_err = "";

// Processing form data when form is submitted
if($_SERVER["REQUEST_METHOD"] == "POST"){

    // Check if username is empty
    if(empty(trim($_POST["username"]))){
        $username_err = "Please enter username.";
    } else{
        $username = trim($_POST["username"]);
    }

    // Check if password is empty
    if(empty(trim($_POST["password"]))){
        $password_err = "Please enter your password.";
    } else{
        $password = trim($_POST["password"]);
    }

    // Validate credentials
    if(empty($username_err) && empty($password_err)){
        // Prepare a select statement
        $sql = "SELECT id, username, password FROM users WHERE username = ?";

        if($stmt = mysqli_prepare($link, $sql)){
            // Bind variables to the prepared statement as parameters
            mysqli_stmt_bind_param($stmt, "s", $param_username);

            // Set parameters
```

```php
    $param_username = $username;

    // Attempt to execute the prepared statement
    if(mysqli_stmt_execute($stmt)){
        // Store result
        mysqli_stmt_store_result($stmt);

        // Check if username exists, if yes then verify password
        if(mysqli_stmt_num_rows($stmt) == 1){
            // Bind result variables
            mysqli_stmt_bind_result($stmt, $id, $username, $hashed_password);
            if(mysqli_stmt_fetch($stmt)){
                if(password_verify($password, $hashed_password)){
                    // Password is correct, so start a new session
                    session_start();

                    // Store data in session variables
                    $_SESSION["loggedin"] = true;
                    $_SESSION["id"] = $id;
                    $_SESSION["username"] = $username;

                    // Redirect user to welcome page
                    header("location: welcome.php");
                } else{
                    // Password is not valid, display a generic error message
                    $login_err = "Invalid username or password.";
                }
            }
        } else{
            // Username doesn't exist, display a generic error message
            $login_err = "Invalid username or password.";
        }
    } else{
        echo "Oops! Something went wrong. Please try again later.";
    }

    // Close statement
    mysqli_stmt_close($stmt);
    }
    }

    // Close connection
    mysqli_close($link);
}
```

```
?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Login</title>


</head>
<body>

    <h2>Login</h2>
    <p>Please fill in your credentials to login.</p>

    <?php
    if(!empty($login_err)){
        echo "<span>". $login_err."</span>";
    }
    ?>

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

        Username:
        <input type="text" name="username" <?php echo (!empty($username_err)) ? 'is-invalid' : ''; ?>" value="<?php echo $username; ?>">
        <span><?php echo $username_err; ?></span>
        <br><br>


        Password:
        <input type="password" name="password"<?php echo (!empty($password_err)) ? 'is-invalid' : ''; ?>">
        <span class="invalid-feedback"><?php echo $password_err; ?></span>
        <br><br>
        <input type="submit"  value="Login">

    <p>Don't have an account? <a href="register.php">Sign up now</a>.</p>
    </form>

</body>
</html>
```

```php
<?php
// Initialize the session
session_start();

// Unset all of the session variables
$_SESSION = array();

// Destroy the session.
session_destroy();

// Redirect to login page
header("location: login.php");
exit;
?>
```

register.php
```php
<?php
// Include config file
require_once "config.php";

// Define variables and initialize with empty values
$username = $password = $confirm_password = "";
$username_err = $password_err = $confirm_password_err = "";

// Processing form data when form is submitted
if($_SERVER["REQUEST_METHOD"] == "POST"){

    // Validate username
    if(empty(trim($_POST["username"]))){
        $username_err = "Please enter a username.";
    } elseif(!preg_match('/^[a-zA-Z0-9_]+$/', trim($_POST["username"]))){
        $username_err = "Username can only contain letters, numbers, and
underscores.";
    } else{
        // Prepare a select statement
        $sql = "SELECT id FROM users WHERE username = ?";

        if($stmt = mysqli_prepare($link, $sql)){
            // Bind variables to the prepared statement as parameters
            mysqli_stmt_bind_param($stmt, "s", $param_username);

            // Set parameters
            $param_username = trim($_POST["username"]);

            // Attempt to execute the prepared statement
            if(mysqli_stmt_execute($stmt)){
                /* store result */
                mysqli_stmt_store_result($stmt);

                if(mysqli_stmt_num_rows($stmt) == 1){
                    $username_err = "This username is already taken.";
                } else{
                    $username = trim($_POST["username"]);
                }
            } else{
                echo "Oops! Something went wrong. Please try again later.";
            }

            // Close statement
            mysqli_stmt_close($stmt);
```

```php
        }
    }

    // Validate password
    if(empty(trim($_POST["password"]))){
        $password_err = "Please enter a password.";
    } elseif(strlen(trim($_POST["password"])) < 6){
        $password_err = "Password must have atleast 6 characters.";
    } else{
        $password = trim($_POST["password"]);
    }

    // Validate confirm password
    if(empty(trim($_POST["confirm_password"]))){
        $confirm_password_err = "Please confirm password.";
    } else{
        $confirm_password = trim($_POST["confirm_password"]);
        if(empty($password_err) && ($password != $confirm_password)){
            $confirm_password_err = "Password did not match.";
        }
    }

    // Check input errors before inserting in database
    if(empty($username_err) && empty($password_err) &&
empty($confirm_password_err)){

        // Prepare an insert statement
        $sql = "INSERT INTO users (username, password) VALUES (?, ?)";

        if($stmt = mysqli_prepare($link, $sql)){
            // Bind variables to the prepared statement as parameters
            mysqli_stmt_bind_param($stmt, "ss", $param_username, $param_password);

            // Set parameters
            $param_username = $username;
            $param_password = password_hash($password, PASSWORD_DEFAULT); //
Creates a password hash

            // Attempt to execute the prepared statement
            if(mysqli_stmt_execute($stmt)){
                // Redirect to login page
                header("location: login.php");
            } else{
                echo "Oops! Something went wrong. Please try again later.";
```

```php
        }

        // Close statement
        mysqli_stmt_close($stmt);
    }
  }

  // Close connection
  mysqli_close($link);
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Sign Up</title>

</head>
<body>

    <h2>Sign Up</h2>
    <p>Please fill this form to create an account.</p>
    <form action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>"
method="post">

        <label>Username</label>
        <input type="text" name="username" <?php echo (!empty($username_err)) ?
'is-invalid' : ''; ?>" value="<?php echo $username; ?>">
        <span ><?php echo $username_err; ?></span>
        <br><br>

        <label>Password</label>
        <input type="password" name="password" <?php echo
(!empty($password_err)) ? 'is-invalid' : ''; ?>" value="<?php echo $password;
?>"><br><br>
        <span ><?php echo $password_err; ?></span>


        <label>Confirm Password</label>
        <input type="password" name="confirm_password"  <?php echo
(!empty($confirm_password_err)) ? 'is-invalid' : ''; ?>" value="<?php echo
$confirm_password; ?>"><br><br>
        <span ><?php echo $confirm_password_err; ?></span>
        <br>
```

```
        <input type="submit"  value="Submit">
        <input type="reset" value="Reset">

      <p>Already have an account? <a href="login.php">Login here</a>.</p>
    </form>
</body>
</html>
```

```php
<?php
// Initialize the session
session_start();

// Check if the user is logged in, otherwise redirect to login page
if(!isset($_SESSION["loggedin"]) || $_SESSION["loggedin"] !== true){
    header("location: login.php");
    exit;
}

// Include config file
require_once "config.php";

// Define variables and initialize with empty values
$new_password = $confirm_password = "";
$new_password_err = $confirm_password_err = "";

// Processing form data when form is submitted
if($_SERVER["REQUEST_METHOD"] == "POST"){

    // Validate new password
    if(empty(trim($_POST["new_password"]))){
        $new_password_err = "Please enter the new password.";
    } elseif(strlen(trim($_POST["new_password"])) < 6){
        $new_password_err = "Password must have atleast 6 characters.";
    } else{
        $new_password = trim($_POST["new_password"]);
    }

    // Validate confirm password
    if(empty(trim($_POST["confirm_password"]))){
        $confirm_password_err = "Please confirm the password.";
    } else{
        $confirm_password = trim($_POST["confirm_password"]);
        if(empty($new_password_err) && ($new_password != $confirm_password)){
            $confirm_password_err = "Password did not match.";
        }
    }

    // Check input errors before updating the database
    if(empty($new_password_err) && empty($confirm_password_err)){
        // Prepare an update statement
        $sql = "UPDATE users SET password = ? WHERE id = ?";
```

```php
    if($stmt = mysqli_prepare($link, $sql)){
        // Bind variables to the prepared statement as parameters
        mysqli_stmt_bind_param($stmt, "si", $param_password, $param_id);

        // Set parameters
        $param_password = password_hash($new_password, PASSWORD_DEFAULT);
        $param_id = $_SESSION["id"];

        // Attempt to execute the prepared statement
        if(mysqli_stmt_execute($stmt)){
            // Password updated successfully. Destroy the session, and redirect to login
page

            session_destroy();
            header("location: login.php");
            exit();
        } else{
            echo "Oops! Something went wrong. Please try again later.";
        }

        // Close statement
        mysqli_stmt_close($stmt);
    }
}

    // Close connection
    mysqli_close($link);
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Reset Password</title>
    <link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
    <style>
        body{ font: 14px sans-serif; }
        .wrapper{ width: 360px; padding: 20px; }
    </style>
</head>
<body>
    <div class="wrapper">
        <h2>Reset Password</h2>
```

reset.php

```
<p>Please fill out this form to reset your password.</p>
<form action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>" method="post">
    <div class="form-group">
        <label>New Password</label>
        <input type="password" name="new_password" class="form-control <?php echo (!empty($new_password_err)) ? 'is-invalid' : ''; ?>" value="<?php echo $new_password; ?>">
        <span class="invalid-feedback"><?php echo $new_password_err; ?></span>
    </div>
    <div class="form-group">
        <label>Confirm Password</label>
        <input type="password" name="confirm_password" class="form-control <?php echo (!empty($confirm_password_err)) ? 'is-invalid' : ''; ?>">
        <span class="invalid-feedback"><?php echo $confirm_password_err; ?></span>
    </div>
    <div class="form-group">
        <input type="submit" class="btn btn-primary" value="Submit">
        <a class="btn btn-link ml-2" href="welcome.php">Cancel</a>
    </div>
</form>
</div>
</body>
</html>
```

welcome.php

```php
<?php
// Initialize the session
session_start();

// Check if the user is logged in, if not then redirect him to login page
if(!isset($_SESSION["loggedin"]) || $_SESSION["loggedin"] !== true){
    header("location: login.php");
    exit;
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Welcome</title>

    <style>
        body{ font: 14px sans-serif; text-align: center; }
    </style>
</head>
<body>
    <h1 class="my-5">Hi, <b><?php echo htmlspecialchars($_SESSION["username"]);
?></b>. Welcome to our site.</h1>
    <p>
        <a href="reset.php">Reset Your Password</a>
        <a href="logout.php">Sign Out of Your Account</a>
    </p>
</body>
</html>
```