

KLE Society's S Nijalingappa College
Bachelor of Computer Application



Web Programming Lab Manual

5th Semester NEP Syllabus

Labcycle 1: Create a form with the elements of Textboxes, Radio buttons, Checkboxes, and so on. Write JavaScript code to validate the format in email, and mobile number in 10 characters, If a textbox has been left empty, popup an alert indicating when email, mobile number and textbox has been left empty.

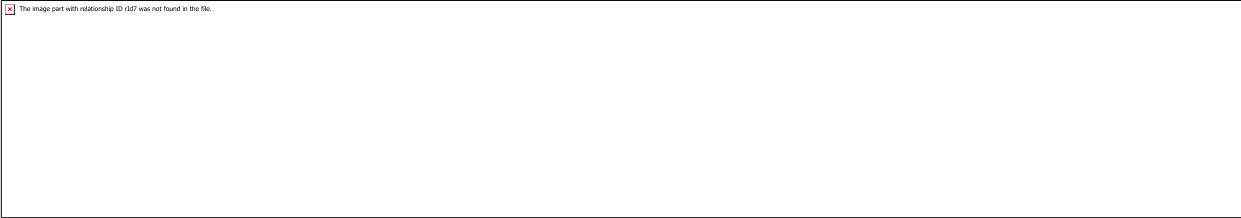
```
<!xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<head>
<title> Validate Text Boxes </title>
<script type="text/javascript">
function check()
{
varmyArray=new Array();
for(vari=0;i<document.myForm.length;i++)
{
if(document.myForm.elements[i].value.length ==0)
{
myArray.push(document.myForm.elements[i].name);
}
}
if(myArray.length !=0)
{
alert("The following Text Boxes are Empty: \n" +myArray);
return false;
}
else
{
validateEmail();
validatePhoneNumber();
return false;
}
}
functionvalidateEmail() {
var email = document.getElementById("email").value;
var pattern1 = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
varisValid = pattern1.test(email);

if (isValid) {
document.getElementById("result1").innerHTML += "Email is valid.";
} else {
document.getElementById("result1").innerHTML += "Email is invalid.";
}
}

functionvalidatePhoneNumber() {
varPh_number = document.getElementById("ph_no").value;
if (Ph_number.length ==10)
{
document.getElementById("result2").innerHTML += "Phone number is valid.";
}
else
{
document.getElementById("result2").innerHTML += "Phone number is invalid.";
}
}
```

```
}  
  
</script>  
  
</head>  
<body>  
<form name="myForm"onsubmit="return check()">  
    Email: <input type="text" id="email" name="Email"/>  
    Phone_Number:<input type="text" id="ph_no" name="Phone_Number"/>  
    Age: <input type="text" name="Age"/><br/><br/>  
<input type="submit" value="Send message"/><br/><br/>  
</form>  
  
<p id="result1"></p>  
<p id="result2"></p>  
</body>  
</html>
```

Output:

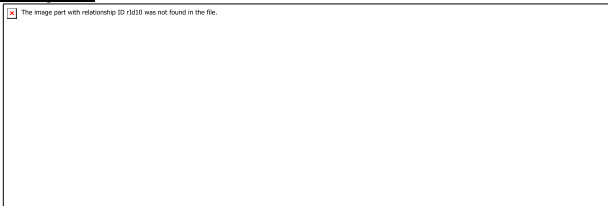


Labcycle 2: Develop a HTML Form, which accepts any Mathematical expression. Write JavaScript code to Evaluates the expression and Displays the result.

```
<!xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<metacharset="utf-8" />
<title>Expression Evaluation</title>
  <script type="text/javascript">
    function Evaluate()
      {
        varenteredExpr = document.getElementById("expr").value;
        document.getElementById("result").value = eval(enteredExpr);
      }
  </script>
</head>

<body>
  <form name="myForm">
    Enter any valid expression: <input type="text" id="expr" /><br /><br />
    <input type="button" value="Evaluate"onClick="Evaluate()" /><br /><br />
    Result of expression: <input type="text" id="result" /><br /><br />
  </form>
</body>
</html>
```

Output:



Labcycle 3: Create a page with dynamic effects. Write the code to include layers and basic animation.

```
<!xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title> Basic Animation </title>
<style>
#layer1{position:absolute; top:50px;left:50px;}
#layer2{position:absolute; top:50px;left:400px;}
#layer3{position:absolute; top:50px;left:800px;}
</style>

<script type="text/javascript">
functionmoveImage(layer)
{
var top = window.prompt("Enter top value");
var left = window.prompt("Enter left value");
document.getElementById(layer).style.top =top+'px';
document.getElementById(layer).style.left =left+'px';
}
</script>
</head>

<body>
<div id="layer1"><imgsrc="ball.jpg"onclick="moveImage('layer1')" alt="My Image."/></div>
<div id="layer2"><imgsrc="ball.jpg"onclick="moveImage('layer2')" alt="My Image."/></div>
<div id="layer3"><imgsrc="ball.jpg"onclick="moveImage('layer3')" alt="My Image."/></div>
</body>
</html>
```

Output:

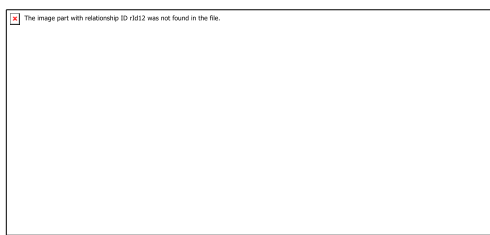


Labcycle 4: Write a JavaScript code to find the sum of N natural Numbers. (Use userdefined function)

```
<html>
<head>
<title>JavaScript program to find the Sum of n natural numbers</title>
</head>
<body>
<table>
<tr>
<td> <input type="text" name="a" id="first" placeholder="Enter a number"/> </td>
</tr>
<tr>
<td> <button onclick="sum ()">Submit</button></td>
</tr>
</table>
<div id="num"></div>
</body>

<script type="text/javascript">
function sum()
{
var n,i, sum = 0;
n = parseInt(document.getElementById ("first").value);
for (i = 1; i<= n; i++)
{
sum = sum+i;
}
document.getElementById ("num").innerHTML="Sum of "+n+ " natural numbers is :"+sum;
}
</script>
</html>
```

Output:



Labcycle 5: Write a JavaScript code block using arrays and generate the current date in words, this should include the day, month and year.

```
<!xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Date Display</title>
<script type="text/javascript">
    var days = [ "First", "Second", "Third", "Fourth", "Fifth", "Sixth", "Seventh", "Eighth", "Ninth", "Tenth",
"Eleventh", "Twelfth", "Thirteenth", "Fourteenth", "Fifteenth", "Sixteenth", "Seventeenth", "Eighteenth",
"Ninteenth", "Twentyeth", "TwentyFirst", "TwentySecond", "TwentyThird", "TwentyFourth", "TwentyFifth",
"TwentySixth", "TwentySeventh", "TwentyEighth", "TwentyNinth", "Thirtyeth", "ThirtyFirst"];

    var months = [ "January", "February", "March", "April", "May", "June", "July", "August", "September",
"October", "November", "December" ];

    var year = "Two Thousand Twenty Three";
    vardateObj = new Date();
    varcurrMonth = dateObj.getMonth();
    varcurrDate = dateObj.getDate();
    varcurrYear = dateObj.getFullYear();

    if (currYear == 2023)
        alert ("Today's Date is : " + days [ currDate - 1 ] + "" + months [ currMonth ] + "" + year );
    else
        alert ("Today's Date is : " + days [ currDate - 1 ] + "" + months [ currMonth ] + "" + currYear );
</script>
</head>
<body>
</body>
</html>
```

Output:



Labcycle 6: Create a form for Student information. Write JavaScript code to find Total, Average, Result and Grade.

```
<!xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Student Data Example</title>
  <script type="text/javascript">
    functionshowResult()
      {
        var name = document.getElementById ( "name" ) .value;
        varcls = document.getElementById ( "class" ) .value;
        var marks1 = parseInt ( document.getElementById ("sub1").value );
        var marks2 = parseInt ( document.getElementById ("sub2").value );
        var marks3 = parseInt ( document.getElementById ("sub3").value );
        var total = marks1 + marks2 + marks3;
        varavg = total / 3;
        var grade, result;
        if ( avg>= 60 )
          {
            grade = "A";
            result = "First Class";
          }
        else if ( avg< 60 &&avg>= 50 )
          {
            grade = "B";
            result = "Second Class";
          }
        else if ( avg< 50 &&avg>= 40 )
          {
            grade = "C";
            result = "Third Class";
          }
        else
          {
            grade = "D";
            result = "Fail";
          }
        document.write("<h2> Results </h2>" );
        document.write("<b> Name: " + name + "</b><br />" );
        document.write("<b> Class: " + cls + "</b><br />" );
        document.write("<b> Total Marks: " + total + "</b><br />" );
        document.write("<b> Average: " + avg + "</b><br />" );
        document.write("<b> Grade: " + grade + "</b><br />" );
        document.write("<b> Result: " + result + "</b><br />" );
      }
  </script>
</head>

<body>
  <form>
    <table border="5">
```



```

<tr>
  <th align="center" colspan="2">Student Details</th>
</tr>

<tr>
<td>Student Name: </td>
  <td><input type="text" id="name" /></td>
</tr>

<tr>
<td>Student Class: </td>
  <td><input type="text" id="class" /></td>
</tr>

<tr>
<td>Student Marks1: </td>
  <td><input type="number" id="sub1" /></td>
</tr>

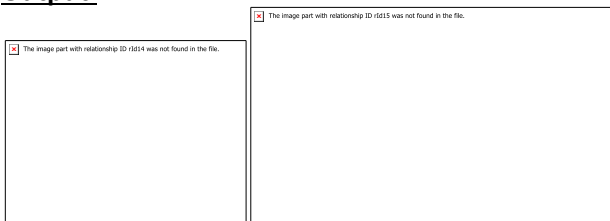
<tr>
<td>Student Marks2: </td>
  <td><input type="number" id="sub2" /></td>
</tr>

<tr>
<td>Student Marks3: </td>
  <td><input type="number" id="sub3" /></td>
</tr>

</table>
<input type="button" value="View Results" onClick="showResult()" />
</form>
</body>
</html>

```

Output:



Labcycle 7: Create a form for Employee information. Write JavaScript code to find DA, HRA, PF, TAX, Gross pay, Deduction and Net pay.

```
<!xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>Employee Salary Details</title>
<script type="text/javascript">
functionshowSalary()
    {
        varempname = document.getElementById ( "empname" ) .value;
        varempno = document.getElementById ( "empno" ) .value;
        var basic = parseInt ( document.getElementById ( "basic" ) .value );
        varhra = basic * 0.4;
        varda = basic * 0.6;
        var gross = basic + hra + da;
        varpf = gross * 0.13;
        var tax = gross * 0.2;
        var deductions = pf + tax;
        varnetsalary = gross - deductions;
        document.writeln( "<table border='5'>");
        document.writeln( "<tr><th> Employee Salary Details </th></tr>");
        document.writeln( "<tr><td>Emp Name: </td><td>" + empname + "</td></tr>");
        document.writeln( "<tr><td>Emp No: </td><td>" + empno + "</td></tr>" );
        document.writeln( "<tr><td> Basic Salary: </td><td>" + basic + "</td></tr>" );
        document.writeln( "<tr><td> HRA: </td><td>" + hra + "</td></tr>" );
        document.writeln( "<tr><td> DA: </td><td>" + da + "</td></tr>" );
        document.writeln( "<tr><td> Gross Salary: </td><td>" + gross + "</td></tr>" );
        document.writeln( "<tr><td> PF: </td><td>" + pf + "</td></tr>" );
        document.writeln( "<tr><td> Tax: </td><td>" + tax + "</td></tr>" );
        document.writeln( "<tr><td> Deductions: </td><td>" + deductions + "</td></tr>" );
        document.writeln( "<tr><td> Net Salary: </td><td>" + netsalary + "</td></tr>" );
    }
</script>
</head>

<body>
<form>
<table border="5">

    <tr>
        <th> Employee Details </th>
    </tr>

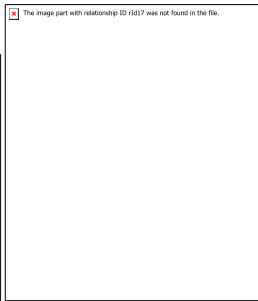
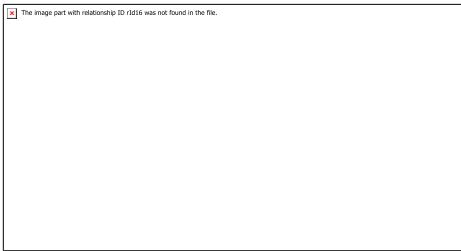
    <tr>
        <th> Employee Name: </th>
        <td><input type="text" id="empname" /></td>
    </tr>

    <tr>
        <th> Employee No: </th>
        <td><input type="text" id="empno" /></td>
    </tr>
</table>
</body>
</html>
```

```
</tr>

<tr>
  <th> Basic Pay: </th>
  <td><input type="number" id="basic" /></td>
</tr>
</table>
<br /><input type="button" value="Show Salary Details"onClick="showSalary()" />
</form>
</body>
</html>
```

Output:



Labcycle 8: Write a program in PHP to change background color based on day of the week using if else if statements and using arrays .

```
<?php
$dayColors = [
'Sunday'=>'#ffcccb',
'Monday'=>'#ffeabd',
'Tuesday'=>'#add8e6',
'Wednesday' =>'#98fb98',
'Thursday'=>'#f0e68c',
'Friday'=>'#dda0dd',
'Saturday'=>'#c0c0c0'
];
$currentDay =date('l');
$backgroundColor ='#ffffff';

if (array_key_exists($currentDay, $dayColors))
{
    $backgroundColor = $dayColors[$currentDay];
}
?>

<html>
<head>
<title> Background Color based on the day of the week </title>
<style>
body {
    background-color:<?php echo $backgroundColor; ?>;
}
</style>
</head>
<body>
<h1> welcome! today is <?php echo $currentDay; ?></h1>
</body>
</html>
```

Labcycle 9: Write a simple program in PHP for i) generating Prime number ii) generate Fibonacci series.

```
<?php
functionisPrime($num) {
if($num <=1)
{
return false;
}
for ($i=2;$i<=sqrt($num);$i++)
{
if($num % $i == 0)
{
return false;
}
}
return true;
}
```

```
functiongeneratePrimes($n)
{
$primeNumbers = [];
$count = 0;
$i =2;

while ($count <$n)
{
if(isPrime($i)) {
$primeNumbers[] = $i;
$count++;
}
$i++;
}
return $primeNumbers;
}
```

```
functiongenerateFibonacci($n) {
$fibonacciSeries=[];
$first = 0;
$second = 1;
$fibonacciSeries[] = $first;
$fibonacciSeries[] = $second;

for($i=2;$i<$n; $i++) {
$next = $first + $second;
$fibonacciSeries[] = $next;
```

```
$first = $second;  
$second = $next;  
}  
return $fibonacciSeries;  
}
```

```
$numberOfPrimes = 50;  
$numberOfTerms = 50;
```

```
$primes = generatePrimes($numberOfPrimes);  
$fibonacci = generateFibonacci ($numberOfTerms);
```

```
echo"Prime numbers:";  
echo"<pre>".print_r($primes,true). "</pre>";
```

```
echo"Fibonacci series:";  
echo"<pre>".print_r($fibonacci, true). "</pre>";  
?>
```

Labcycle 10: Write a PHP program to remove duplicates from a sorted list

```
<?php
functionremove_duplicates_list($list1) {
    $nums_unique = array_values(array_unique($list1));
return $nums_unique ;
}
$nums = array(1,1,2,2,3,4,5,5);
echo"<pre>".print_r($nums,true)."</pre>";
echo"After removing duplicates";
echo"<pre>".print_r(remove_duplicates_list($nums), true)."</pre>";
?>
```

Labcycle 11: Write a PHP Script to print the following pattern on the Screen:

```
*****
****
***
**
*
```

```
<?php
$rows = 5;
for($i=$rows; $i>=1;$i--) {
for($j=$rows; $j>$i; $j--) {
echo"&nbsp;";
}
for($k=1;$k<=$i; $k++) {
echo"*";
}
echo"<br>";
}
?>
```


Labcycle 12: Write a simple program in PHP for Searching of data by different criteria.

```
<?php
$users=[ ['id' => 1, 'name' =>'Anjali', 'age' => 20, 'email' =>'anjali@example.com'],
         ['id' => 2, 'name' =>'Neha', 'age' => 19, 'email' =>'nena@example.com'],
         ['id' => 3, 'name' =>'Madhu', 'age' => 22, 'email' =>'madhu@example.com'],
         ['id' => 4, 'name' =>'Vinay', 'age' => 21, 'email' =>'vinay@example.com'],
];

function searchData($data, $criteria, $value) {
    $results =[];
    foreach ($data as $item) {
        if($item[$criteria] == $value) {
            $results[]=$item;
        }
    }
    return $results;
}

$searchCriteria ='age';
$searchValue =20;
$searchResults = searchData($users, $searchCriteria, $searchValue);
echo"Search results for $searchCriteria = $searchValue:<br>";
if(count($searchResults) > 0) {
    foreach ($searchResults as $result) {
        echo "ID:" .$result['id'] .", Name:" .$result['name'].",Age:" .$result['age']. ", Email: " .$result['email']. "<br>";
    }
}
else
{
    echo"no results found";
}
?>
```

Labcycle 13: Write a function in PHP to generate captcha code

```
<?php
functiongenerateCaptcha(){
    $length = 6;
    $characters = 'ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789';
    $captcha = '';
    $charLength=strlen($characters);

    for($i=0; $i<$length; $i++)
    {
        $captcha .= $characters[rand(0, $charLength - 1)];
    }
    $_SESSION["captcha"] = $captcha;
    return $captcha;
}
session_start();
$captchaCode = generateCaptcha();
echo $captchaCode;

?>
```

Labcycle 15: Write a program in PHP to read and write file using form control.

```
<!DOCTYPE html>
<html>
<head>
<title> Read and Write File </title>
</head>
<body>
<h2>Write to File </h2>
<form action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>"
method="post">
<textarea name="content" rows="5" cols="40" placeholder="Enter text to write"></textarea><br><br>
<input type="submit" name="write" value="write to File">
</form>
<hr>
<h2>Read from File </h2>
<?php
$file='data.txt';

if($_SERVER["REQUEST_METHOD"] == "POST" && isset($_POST['write'])) {
$content = $_POST['content'];
file_put_contents($file, $content, FILE_APPEND | LOCK_EX);
echo "content written to file successfully!";
}
if(file_exists($file)) {
$content = file_get_contents($file);
echo "<pre>$content </pre>";
}
else
{
echo "file not found!";
}
?>
</body>
</html>
```


Labcycle 17: Write a program in PHP to Validate Input

```
<?php
// Function to validate an email address
functionvalidateEmail($email) {
    // Define a regular expression for a valid email address
    $emailRegex = '/^[a-zA-Z0-9._-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,6}$/';

    // Use the preg_match function to check if the email matches the pattern
    returnpreg_match($emailRegex, $email);
}

// Check if the form is submitted
if ($_SERVER["REQUEST_METHOD"] == "POST") {
    // Retrieve the values from the form
    $email = $_POST["email"];

    // Validate email and username
    $isEmailValid = validateEmail($email);

    // Display validation results
    if ($isEmailValid) {
        echo"Email is valid!";
    } else {
        echo"Invalid email ";
    }
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
<metacharset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Email Validation</title>
</head>
<body>
<h2>Enter Your Email </h2>
<form action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>" method="post">
<label for="email">Email:</label>
<input type="text" id="email" name="email" required>
<br>
<input type="submit" value="Submit">
</form>
</body>
</html>
```

Labcycle 18: Write a program in PHP for setting and retrieving a cookie

```
<?php
$cookie_name = "UserID";
$cookie_value = "A1B234C";
$expiration_time = time() + (24 * 3600);

setcookie($cookie_name, $cookie_value, $expiration_time, "/");
echo"Cookie '$cookie_name' is set. <br><br><br>";
if(isset($_COOKIE[$cookie_name]))
{
echo"Value of cookie '$cookie_name' is: ".$_COOKIE[$cookie_name];
}
else
{
echo"Cookie named '$cookie_name' is not set.";
}
?>
```

Labcycle 19. Write a PHP program to Create a simple webpage of a college

index.php

```
<!DOCTYPE html>
<html>
<head>
<title> KLE S Nijalingappa College</title>
<style>
body {
font-family: Arial, sans-serif;
    }
header{
background-color: #f8f9fa;
padding: 20px;
text-align: center;
    }
nav {
margin: 20px 0;
text-align: center;
    }
nav a {
margin: 0 15px;
    }
</style>
</head>
<body>
<header>
<imgsrc ="logo.jpg" alt="KLE society S Nijalingappa College" width="100">
<h1> KLE Society's S Nijalingappa College </h1>
<p> 642/1, 12th Main Rd, Basaveshwar Nagar, </p>
<p>Rajajinagar, Bengaluru, Karnataka 560010 </p>
</header>
<nav>
<a href="index.php">Home</a>
<a href="about.html">About us</a>
<a href="Courses.php">Courses</a>
```

```
<a href="Contact.html">Contact Us</a>
```

```
</nav>
```

```
<main>
```

```
<h2> Welcome to KLE College Rajajinagar</h2>
```

```
<p>We provide best education on computer applications courses </p>
```

```
</main>
```

```
</body>
```

```
</html>
```

[about.html](#)

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title> About us - KLE Society S Nijalingappa college </title>
```

```
</head>
```

```
<body>
```

```
<h1>About us </h1>
```

```
<p> University K.L.E. Society S. Nijalingappa College, established in the year 1963, is one of the premier institutions of K.L.E Society. It made a humble beginning in a rented building on Mahatma Gandhi Road, near Mayo Hall, as a Science College. It was shifted to the present premises in 1966. The founder Principal Dr.V.G. Nelivigi laid a firm foundation for the college and was responsible for development of the college, by its inclusion under 2(f) and 12(B) of UGC.</p>
```

```
</body>
```

```
</html>
```

Courses.php:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title> Courses - KLE College Rajajinagar</title>
```

```
</head>
```

```
<body>
```

```
<h1> Courses </h1>
```

```
<h2> BCA </h2>
```



```
<h2> MCA </h2>
```

```
</body>
```

```
</html>
```

Contact.html:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title> Contact Us - KLE College Rajajinagar</title>
```

```
</head>
```

```
<body>
```

```
<h1> Contact Us </h1>
```

```
<p>KLE Society S Nijalingappa College </p>
```

```
<p>#1040, II Block, Rajajinagar,</p>
```

```
<p>Bengaluru-560010</p>
```

```
</body>
```

```
</html>
```

Labcycle 20: Write a program in PHP for exception handling for i) divide by zero ii) Checking date format.

```
<?php
try {
    $numerator = 10;
    $denominator = 5;
    if($denominator ===0) {
        throw new Exception ("division by zero error");
    }
    $result = $numerator / $denominator;
    echo"Result of division : " . $result . "<br>";

    $dateString = '2023-12-25';
    $dateFormat = 'Y-m-d';

    $date = DateTime::createFromFormat($dateFormat, $dateString);

    if(!$date || $date -> format($dateFormat) !== $dateString){
        throw new Exception ("Invalid date format");
    }
    echo"Date is valid:" . $dateString;
    } catch (Exception $e) {
        echo"Error:" . $e->getMessage();
    }
?>
```

