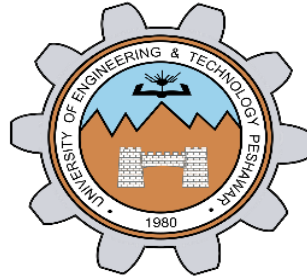


# **Programming in PHP**

## **LAB REPORT # 5**



**Spring 2023**

**Data Base Management System Lab**

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"On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work."

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Submitted to:

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April 04, 2023

Department of Computer Systems Engineering

**University of Engineering and Technology, Peshawar**

# Programming in PHP

## -----Task 5.1-----

In contrast to `settype()`, there is another method that causes a variable's value to be treated as a specific type. It is known as type casting. Note that the variable itself remains unaffected during type casting. Consider the following variable: • `$test_var = 8.23`; Type cast this variable's value to integer, string, and Boolean and show result using `echo`.

### Code:

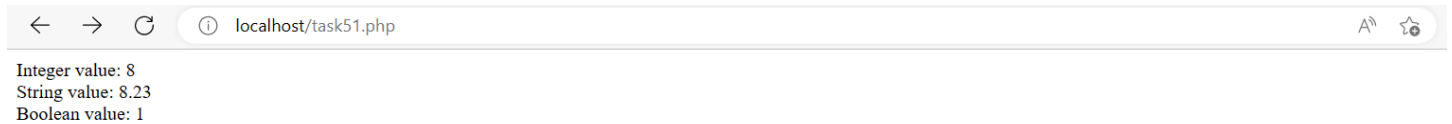
```
<?php
$test_var = 8.23;

// Type cast to integer
$test_int = (int) $test_var;
echo "Integer value: $test_int <br>";

// Type cast to string
$test_str = (string) $test_var;
echo "String value: $test_str <br>";

// Type cast to boolean
$test_bool = (bool) $test_var;
echo "Boolean value: $test_bool <br>";
?>
```

### Output:



Integer value: 8  
String value: 8.23  
Boolean value: 1

## -----Task 5.2-----

Use and Specify the purpose of following functions:

- 1) `intval( value )`
- 2) `floatval( value )`
- 3) `strval( value )`

### Code:

```
<?php
//this is the example for the intval function shown in the lab manual

$float_value = 3.14;
$int_value = intval($float_value);
echo "This is the float to Int conversin : $int_value <br>"; // Output: 3

$string_value = "42";
$int_value = intval($string_value);
echo "This is the string to int conversion: $int_value<br>"; // Output: 42
```

```

$string_value = "Hello world!";
$int_value = intval($string_value);
echo "This is the string to integer conversion: $int_value<br>"; // Output: 0

//this is the example for the use of the floatval function
$int_value = 42;
$float_value = floatval($int_value);
echo "This is the conversion of integer to float value: $float_value<br>"; // Output: 42.0

$string_value = "3.14";
$float_value = floatval($string_value);
echo "This is the conversion of the string to value: $float_value<br>"; // Output: 3.14

$string_value = "Hello world!";
$float_value = floatval($string_value);
echo "This is the conversion of the string to float value by floatval function: $float_value<br>"; // Output: 0

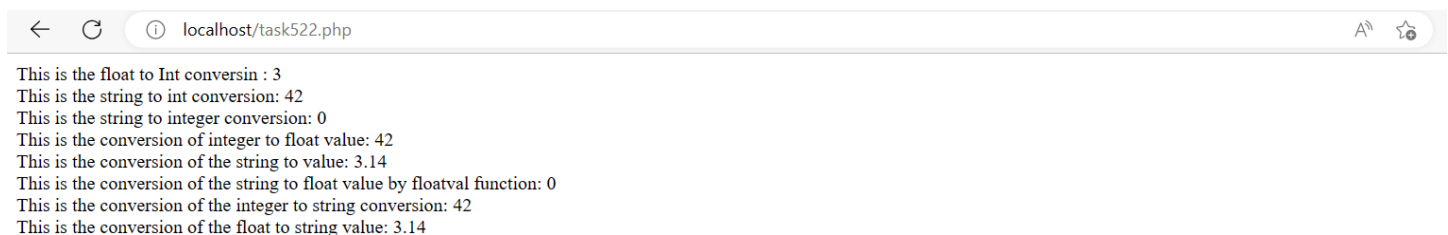
//this is the example for the use of the strval function
$int_value = 42;
$string_value = strval($int_value);
echo "This is the conversion of the integer to string conversion: $string_value<br>"; // Output: "42"

$float_value = 3.14;
$string_value = strval($float_value);
echo "This is the conversion of the float to string value: $string_value<br>"; // Output: "3.14"

?>

```

## Output:



This is the float to Int conversin : 3  
 This is the string to int conversion: 42  
 This is the string to integer conversion: 0  
 This is the conversion of integer to float value: 42  
 This is the conversion of the string to value: 3.14  
 This is the conversion of the string to float value by floatval function: 0  
 This is the conversion of the integer to string conversion: 42  
 This is the conversion of the float to string value: 3.14

## -----Task 5.3-----

Write PHP script that shows the division table displayed as in Table 5.2 using different loops. For each number, display whether that number is an odd or even number, and also display a message if the number is a prime number. Display this information within an HTML table.

## Code:

```

<!DOCTYPE html>
<html>
<head>
  <title>Table to check weather the numbers are even or odd</title>
</head>

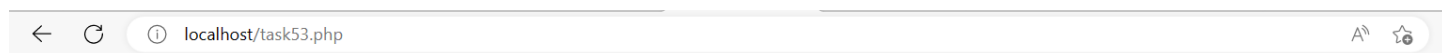
```

```

<body>
<table border="1px solid">
  <thead>
    <tr>
      <th>&nbsp;</th>
      <?php
        for ($i = 1; $i <= 5; $i++) {
          echo "<th>$i</th>";
        }
      ?>
    </tr>
  </thead>
  <tbody>
    <?php
      for ($i = 1; $i <= 5; $i++) {
        echo "<tr>";
        echo "<td>$i</td>";
        for ($j = 1; $j <= 5; $j++) {
          $result = $i / $j;
          if ($i % 2 == 0) {
            $is_even_odd = "Even";
          } else {
            $is_even_odd = "Odd";
          }
          $is_prime = true;
          for ($k = 2; $k <= $i/2; $k++) {
            if ($i % $k == 0) {
              $is_prime = false;
              break;
            }
          }
          if ($is_prime && $j != 1) {
            echo "<td><b>$result</b><br>($is_even_odd)<br>Prime</td>";
          } else {
            echo "<td>$result<br>($is_even_odd)</td>";
          }
        }
        echo "</tr>";
      }
    ?>
  </tbody>
</table>
</body>
</html>

```

## Output:



|             | 1                     | 2                                   | 3                      | 4                      | 5 |
|-------------|-----------------------|-------------------------------------|------------------------|------------------------|---|
| 1<br>(Odd)  | 0.5<br>(Odd)<br>Prime | 0.33333333333333<br>(Odd)<br>Prime  | 0.25<br>(Odd)<br>Prime | 0.2<br>(Odd)<br>Prime  |   |
| 2<br>(Even) | 1<br>(Even)<br>Prime  | 0.66666666666667<br>(Even)<br>Prime | 0.5<br>(Even)<br>Prime | 0.4<br>(Even)<br>Prime |   |
| 3<br>(Odd)  | 1.5<br>(Odd)<br>Prime | 1<br>(Odd)<br>Prime                 | 0.75<br>(Odd)<br>Prime | 0.6<br>(Odd)<br>Prime  |   |
| 4<br>(Even) | 2<br>(Even)           | 1.33333333333333<br>(Even)          | 1<br>(Even)            | 0.8<br>(Even)          |   |
| 5<br>(Odd)  | 2.5<br>(Odd)<br>Prime | 1.66666666666667<br>(Odd)<br>Prime  | 1.25<br>(Odd)<br>Prime | 1<br>(Odd)<br>Prime    |   |

## -----Task 5.4-----

Explore PHP Object Oriented using examples showing classes, objects, inheritance, and polymorphism.

### Code:

#### Polymorphism

```
<!DOCTYPE html>
<html>
<body>
<h1>Polymorphism in PHP</h1>
<?php
interface Animal {
    public function makeSound();
}
class Lion implements Animal {
    public function makeSound() {
        echo "Roaring! <br>";
    }
}
class Bear implements Animal {
    public function makeSound() {
        echo "cheew!";
    }
}
function animalSound(Animal $animal) {
    $animal->makeSound();
}
$Lion = new Lion();
$Bear = new Bear();
animalSound($Lion);
animalSound($Bear);
?>
</body>
</html>
```

### Output:



## Polymorphism in PHP

Roaring!  
cheew!

### Classes:

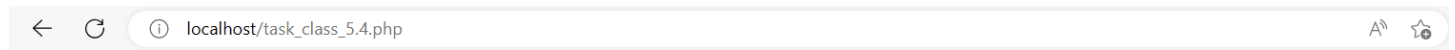
```
<!DOCTYPE html>
<html>
<body>
<h1>Use of Classes</h1>
```

```

<?php
class Person {
public $name;
public $age;
public function construct($name, $age) {
$this->name = $name;
$this->age = $age;
}
public function greet() {
echo "I am Hamza$this->name and I am studying in UET Peshawar,$this->age Department of Computer Systems Engineering.";
}
}
$person1 = new Person("Hamza", "UET Peshawar");
$person1->greet();
?>
</body>
</html>

```

### Output:



## Use of Classes

I am Hamza and I am studying in UET Peshawar, Department of Computer Systems Engineering.

### Inheritance:

```

<!DOCTYPE html>
<html> <body>
<h1>Inheritance</h1>
<?php
class Person {
public $name;
public $age;
public function __construct($name, $age) {
$this->name = $name;
$this->age = $age;
}
public function greet() {
echo "Hello, I am $this->name and I am studying in UET Peshawar,$this->age .";
}
}
$person1 = new Person("Hamza", "DCSE");
$person1->greet();
class Student extends Person {
public $student_id;

public function __construct($name, $age, $student_id) {
parent::__construct($name, $age);
$this->student_id = $student_id;
}
}

```

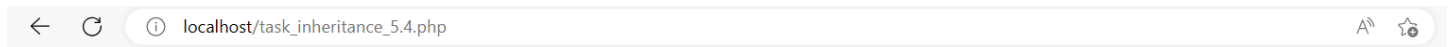
```

public function greet() {
echo "This is $this->name and I am doing $this->student_id in $this->age using PHP.";
}
}

$student1 = new Student("DBMS lab#5", "task#5.4", "inheritance");
$student1->greet();
?>
</body>
</html>

```

### Output:



## Inheritance

Hello, I am Hamza and I am studying in UET Peshawar,DCSE .This is DBMS lab#5 and I am doing inheritance in task#5.4 using PHP.

### -----Task 5.5-----

Build an image gallery website using PHP without database. Your website must show all the images in a given directory. Use bootstrap/CSS in your website. Please note that when a given image is clicked, it enlarges it and shows in higher resolution. Also, your website should be flexible enough to show the images when number of images are increased or decreased from a given directory.

### Code:

```

<!DOCTYPE html>
<html>
<head>
<title>Image Gallery</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
<style>
    .img-thumbnail {
        width: 200px;
        height: 200px;
        object-fit: cover;
        cursor: pointer;
    }

    #myModal img {
        max-width: 100%;
        height: auto;
    }
</style>
</head>
<body>

```

```

<div class="container-fluid">
  <div class="row">
    <?php
      $dir = "images/";
      $images = glob($dir . "*. {jpg,jpeg,png,gif}", GLOB_BRACE);
      foreach ($images as $image) {
        echo '<div class="col-md-2 col-sm-4 col-xs-6">';
        echo '<a data-toggle="modal" data-target="#myModal">';
        echo '<img src="" . $image . "" class="img-thumbnail">';
        echo '</a>';
        echo '</div>'; }?>
      </div>
    </div>
  <div class="modal fade" id="myModal" tabindex="-1" role="dialog" aria-labelledby="myModalLabel">
    <div class="modal-dialog" role="document">
      <div class="modal-content">
        <div class="modal-body">
          <img src="" class="img-responsive" id="modallImage">
        </div>
      </div>
    </div>
    <script>
      $(document).ready(function(){
        $('.img-thumbnail').click(function(){
          var imgSrc = $(this).attr('src');
          $('#modallImage').attr('src', imgSrc); });
      });
    </script>
  </body>
</html>

```

## Output:

### Gallery

Welcome to the gallery page, you can view the list of images below.

Upload Image





## -----Task 5.7-----

Implement the following relationship in Laravel. Department: depID, depName, Employee: empID, empName, empJob, dID Note that the department has at least one or many employees working in it; while employee works exactly in one department. Also, feed atleast five records in the created tables.

### Output:

```
Use the "composer fund" command to find out more!
> @php artisan vendor:publish --tag=laravel-assets --ansi --force

  INFO  No publishable resources for tag [laravel-assets].

No security vulnerability advisories found
> @php artisan key:generate --ansi

  INFO  Application key set successfully.

C:\xampp\htdocs\LAB#5>cd testproject
C:\xampp\htdocs\LAB#5\testProject>php artisan serve

  INFO  Server running on [http://127.0.0.1:8000].

Press Ctrl+C to stop the server

2023-04-07 05:14:47 ..... ~ 0s
2023-04-07 05:14:47 /favicon.ico ..... ~ 1s
2023-04-07 05:14:47 ..... ~ 71s
^C
C:\xampp\htdocs\LAB#5\testProject>php artisan tinker
Psy Shell v0.11.14 (PHP 8.0.12 - cli) by Justin Hileman
> use App\Models\Department;
> $department1 = Department::create(['depName' => 'IT']);

  Error  Class "App\Models\Department" not found.

> ^C
C:\xampp\htdocs\LAB#5\testProject>php artisan tinker
Psy Shell v0.11.14 (PHP 8.0.12 - cli) by Justin Hileman
> use App\Models\Department;
> $department1 = Department::create(['depName' => 'IT']);

  Illuminate\Database\Eloquent\MassAssignmentException  Add [depName] to fillable property to allow mass assignment on [App\Models\department].
```

```
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.

C:\xampp\htdocs\LAB#5\testProject>php artisan make:migration create_department_table --create=departments

  INFO  Migration [C:\xampp\htdocs\LAB#5\testProject\database\Migrations\2023_04_07_001639_create_department_table.php] created successfully.

C:\xampp\htdocs\LAB#5\testProject>php artisan make:migration create_employees_table --create=employees

  INFO  Migration [C:\xampp\htdocs\LAB#5\testProject\database\Migrations\2023_04_07_001738_create_employees_table.php] created successfully.

C:\xampp\htdocs\LAB#5\testProject>php artisan migrate

  INFO  Running migrations.

2023_04_07_001639_create_department_table ..... 46ms DONE
2023_04_07_001738_create_employees_table ..... 49ms DONE

C:\xampp\htdocs\LAB#5\testProject>php artisan make:model Employee

  INFO  Model [C:\xampp\htdocs\LAB#5\testProject\app\Models\Employee.php] created successfully.

C:\xampp\htdocs\LAB#5\testProject>php artisan make:model department

  INFO  Model [C:\xampp\htdocs\LAB#5\testProject\app\Models\department.php] created successfully.

C:\xampp\htdocs\LAB#5\testProject>
```

```
Setting environment for using XAMPP for Windows.
DELL@DESKTOP-HIAALSA c:\xampp
# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 9
Server version: 10.4.21-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
MariaDB [(none)]> show databases;
```

```
+-----+
| Database |
+-----+
| information_schema |
| laravel |
| laravelauth8 |
| my_first_laravel_app |
| mysql |
| performance_schema |
| phpmyadmin |
| test |
| testproject1 |
+-----+
9 rows in set (0.034 sec)
```

```
MariaDB [(none)]> use laravel
```

```
Database changed
```

```
MariaDB [laravel]> show tables;
```

```
+-----+
| Tables_in_laravel |
+-----+
| departments |
| employees |
| failed_jobs |
| migrations |
| password_resets |
| personal_access_tokens |
| users |
+-----+
7 rows in set (0.001 sec)
```

```
MariaDB [laravel]> select * from departments;
Empty set (0.004 sec)
```

```
MariaDB [laravel]> select * from departments;
Empty set (0.000 sec)
```

```
MariaDB [laravel]> describe departments;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id | bigint(20) unsigned | NO | PRI | NULL | auto_increment |
| created_at | timestamp | YES | | NULL | |
| updated_at | timestamp | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.021 sec)
```

```
MariaDB [laravel]> describe employees;
```

```
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id | bigint(20) unsigned | NO | PRI | NULL | auto_increment |
| created_at | timestamp | YES | | NULL | |
| updated_at | timestamp | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.021 sec)
```

Registration #: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

---

## CSE 404L – Database Management Systems Lab

### LAB ASSESSMENT RUBRICS

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#### DBMS LAB 05 – Programming in PHP

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| Dimension                              | Exemplary   | Acceptable   | Developing   | Unsatisfactory  | Student Score out of 10 Marks |
|--|---|--|--|---|-------------------------------|
|  | 10  | 8  | 6  | 4   |                               |
| Overall Impression of Lab Report       | Report is complete, well written, and organized appropriately with additional elements that enhance it. | Report is complete, briefly written, and organized. Lacks additional elements. | Report is mostly complete, loosely written, and fairly organized.                | Report is incomplete, sloppy, and/or disorganized.          |                               |
| Submission                             | Report is submitted on time.  | Report is submitted within 24 hours of due date.                               | Report is submitted within 72 hours of due date.                                 | Report was more than 3 days overdue.                        |                               |
| Specification                          | Programs work and exceed specifications.  | Programs work and meet all specifications.                                     | Programs work and meet partial specifications.                                   | Programs work but fail to meet any specification.           |                               |
| Output Figures/Graphics                | All the output figures and graphics are shown clearly and labeled.                                      | Most output figures and graphics are shown clearly and labeled.                | Few of the output figures and graphics are shown and labeled.                    | Output figures and graphics are not shown and not labeled.  |                               |
| Verbal Communication and Understanding | Answered clearly and accurately with sufficient knowledge of PHP.                                       | Answered clearly and accurately with average knowledge of PHP.                 | Answered somewhat clearly and somewhat accurately with limited knowledge of PHP. | Answered wrongly and inaccurately with no knowledge of PHP. |                               |

Marks: ( \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ )/5 = \_\_\_\_\_

Teacher Remarks and Signature: \_\_\_\_\_

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