

PHP Skill Test – Set 1 + Set 2 (With Solutions)

Set 1

1. Reverse a String

Solution:

```
function reverseString($str) {
    $rev = '';
    for ($i = strlen($str)-1; $i >= 0; $i--) {
        $rev .= $str[$i];
    }
    return $rev;
}
echo reverseString("hello");
```

2. Check Prime Number

Solution:

```
function isPrime($n) {
    if ($n <= 1) return false;
    for ($i=2; $i<=sqrt($n); $i++) {
        if ($n % $i == 0) return false;
    }
    return true;
}
echo isPrime(7) ? "Prime" : "Not Prime";
```

3. Array Sum

Solution:

```
$arr = [1,2,3,4,5];
echo array_sum($arr);
```

4. Email Validation

Solution:

```
function validateEmail($email) {
    return filter_var($email, FILTER_VALIDATE_EMAIL) ? "Valid" : "Invalid";
}
echo validateEmail("test@example.com");
```

5. CRUD with MySQL (Insert & Fetch)

Solution:

```
$pdo = new PDO("mysql:host=localhost;dbname=test", "root", "");
$stmt = $pdo->prepare("INSERT INTO users (name, email) VALUES (?, ?)");
$stmt->execute(['John Doe', 'john@example.com']);

foreach ($pdo->query("SELECT * FROM users") as $row) {
    echo $row['name'] . " - " . $row['email'] . "\n";
}
```

6. Form Handling (Password Validation)

Solution:

```
if ($_SERVER['REQUEST_METHOD'] === 'POST') {
    $password = $_POST['password'];
    if (strlen($password) >= 8 && preg_match('/[A-Z]/', $password) && preg_match('/[0-9]/', $password)) {
        echo "Valid Password";
    }
}
```

```

    } else {
        echo "Invalid Password";
    }
}

```

7. File Upload with Validation

Solution:

```

if ($_FILES['file']['size'] <= 2000000) {
    $ext = pathinfo($_FILES['file']['name'], PATHINFO_EXTENSION);
    if (in_array($ext, ['jpg', 'png'])) {
        move_uploaded_file($_FILES['file']['tmp_name'], "uploads/" . $_FILES['file']['name']);
        echo "Uploaded";
    } else {
        echo "Invalid file type";
    }
}

```

8. Session Management

Solution:

```

session_start();
if ($_POST['username'] == 'admin' && $_POST['password'] == '1234') {
    $_SESSION['user'] = 'admin';
    echo "Logged in";
}

```

9. API Integration (Weather)

Solution:

```

$city = "London";
$apiKey = "your_api_key";
$url = "https://api.openweathermap.org/data/2.5/weather?q=$city&appid=$apiKey";
$response = file_get_contents($url);
$data = json_decode($response, true);
echo "Temperature: " . $data['main']['temp'];

```

10. Excel Import/Export (PhpSpreadsheet)

Solution:

```

use PhpOffice\PhpSpreadsheet\IOFactory;
use PhpOffice\PhpSpreadsheet\Spreadsheet;

// Import
$spreadsheet = IOFactory::load("file.xlsx");
$sheetData = $spreadsheet->getActiveSheet()->toArray();
foreach ($sheetData as $row) {
    // insert into DB
}

// Export
$spreadsheet = new Spreadsheet();
$sheet = $spreadsheet->getActiveSheet();
$sheet->setCellValue('A1', 'Hello World !');
$writer = IOFactory::createWriter($spreadsheet, 'Xlsx');
$writer->save('output.xlsx');

```

Set 2

1. Factorial of a Number

Solution:

```
function factorial($n) {
    if ($n <= 1) return 1;
    return $n * factorial($n-1);
}
echo factorial(5);
```

2. Palindrome Check

Solution:

```
function isPalindrome($str) {
    return $str == strrev($str);
}
echo isPalindrome("madam") ? "Yes" : "No";
```

3. Count Vowels

Solution:

```
function countVowels($str) {
    return preg_match_all('/[aeiou]/i', $str);
}
echo countVowels("Hello World");
```

4. JSON Encode/Decode

Solution:

```
$arr = ["name"=>"John", "age"=>25];
$json = json_encode($arr);
print_r(json_decode($json, true));
```

5. Simple Calculator

Solution:

```
if ($_POST) {
    $a = $_POST['a'];
    $b = $_POST['b'];
    $op = $_POST['op'];
    switch ($op) {
        case '+': echo $a+$b; break;
        case '-': echo $a-$b; break;
        case '*': echo $a*$b; break;
        case '/': echo $a/$b; break;
    }
}
```

6. Pagination

Solution:

```
$pdo = new PDO("mysql:host=localhost;dbname=test", "root", "");
$limit = 5;
$page = isset($_GET['page']) ? $_GET['page'] : 1;
$start = ($page-1)*$limit;
$stmt = $pdo->query("SELECT * FROM users LIMIT $start, $limit");
foreach ($stmt as $row) {
    echo $row['name']."\n";
}
```

7. Image Thumbnail Generator

Solution:

```
$src = imagecreatefromjpeg("image.jpg");  
$thumb = imagescale($src, 150, 150);  
imagejpeg($thumb, "thumb.jpg");
```

8. Prepared Statements (PDO)

Solution:

```
$pdo = new PDO("mysql:host=localhost;dbname=test", "root", "");  
$stmt = $pdo->prepare("INSERT INTO users (name, email) VALUES (?, ?)");  
$stmt->execute(["Jane Doe", "jane@example.com"]);
```

9. REST API with PHP

Solution:

```
header('Content-Type: application/json');  
$data = [  
    ["id"=>1, "name"=>"John", "email"=>"john@example.com"],  
    ["id"=>2, "name"=>"Jane", "email"=>"jane@example.com"]  
];  
echo json_encode($data);
```

10. JWT Authentication

Solution:

```
use Firebase\JWT\JWT;  
$key = "secret";  
$payload = ["user"=>"admin", "iat"=>time()];  
$jwt = JWT::encode($payload, $key, 'HS256');  
echo $jwt;
```