# Everlytic Developer Assessment

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Please complete the answers to the questions below. The assessment should take roughly 30 minutes.

### What is the difference between public, protected and private in a class definition?

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| Public - class to be accessed by any class |
| Protected - class protected to be accessed by subclass |
| Private - class private to be accessed by the class itself |

### Given this code: function doSomething(&$foo) { $bar = $foo; $foo += 1; return $foo; } $value = 3; $result = doSomething($value); echo "value: $value, result: $result"; What will be output to screen and why?

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| value: 4, result: 4 |
| - The $value variable is assigned to a value of 3 and is passed to the doSomething() function that increments it by 1 |
| - The $result variable is assigned to whatever the function returns |

### What is wrong with this query: "SELECT \* FROM table WHERE id = $\_POST[ 'id' ]"?

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| This query is vulnerable to sql injection attacks.$\_POST[‘id’] is directly used in the query without any validation or sanitization, allowing a malicious user to input harmful code into the ‘id’ param |
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### What is the cause of this warning: 'Warning: Cannot modify header information - headers already sent', and what is a good practice to prevent it?

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| This is caused by data (html and other output) being outputted before calling the header function in php |
| Fix 1: Use the header function at the very top of your script before any output is generated |
| Fix 2: use ob\_start() and ob\_end\_flush() functions to buffer the output and prevent sending my data before the header function is called |

### What is wrong with this code: class Foo { protected $bar; public function \_\_construct() { $this->bar = 1; } public static function doSomething() { return $this->bar; } }

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| The doSomething() method is static but $bar can only be accessed within non-static methods as it is an instance property |
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### Write a program that prints the numbers from 1 to 100. But for multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".

<?php

for ($i = 1; $i <= 100; $i++)

{

    if ($i % 15 == 0) {

        echo 'FizzBuzz<br>';

    } elseif ($i % 3 == 0) {

        echo 'Fizz<br>';

    } elseif ($i % 5 == 0) {

        echo 'Buzz<br>';

    } else {

        echo $i . '<br>';

    }

}

?>

### **What does the following code do? Explain what’s going on there.**

$date = '08/26/2003';

print preg\_replace('/([0-9]+)\/([0-9]+)\/([0-9]+)/'‚ '$2/$1/$3', $date);

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| The php built-in regular expression converts the date format from mm/dd/yyyy to dd/mm/yyyy |
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### **Given a line of text $string, how would you write a regular expression to strip all the HTML tags from it?**

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| <?php  $string = "<p>Just a string with html<b> tags</b></p>.";  $string = preg\_replace("/<[^>]+>/","",$string);  echo $string;  ?> |
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### A palindrome is a word that reads the same backward or forward. Write a function that checks is a given word is a palindrome. Characters case should be ignored. EG. Deleveled is a palindrome and should return true as character case is ignored.

### <?php class Palindrome

### {

### public static function isPalindrome($word)

{

if (strrev(strtoupper($word)) == $word)

    {

      return true;

    }

  else

    {

      return false;

    }

}

### } echo Palindrome::isPalindrome('Deleveled');

### Considering message\_text stores a combination of html and text. What security issue is prevalent in the code below and how would you fix it? <?php $messageStmt = $db->query('select message\_text from messages where message\_id = 1'); $messageStmt->execute(); $message = $messageStmt->fetch(PDO::FETCH\_OBJ); ?> <div><?php echo $message->message\_text; ?></div> \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I would store this code that deals with queries in a separate php file.eg:

**Functions.php** and add it this:

 <?php include Functions.php';?>

### Write an inner join for the following tables

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| If the spelling of UsrKey was correct on the Address table, I would join the tables like this:    select \* from     User uu inner join Address ad on uu.UserKey = ad.UserKey  However since the spelling is incorrect, These tables CAN'T be joined. |

### Complete the JS function below that validates the conditions of a password: 1. The password must be greater then 7 characters 2. The first character must be a capital letter 3. The password must contain at least one number

   function isPasswordValid($password) {

      var isValid = false;

      var passw=  /^[A-Za-z]\w{7,14}$/;

  if(password.match(passw))

  {

  isValid =true;

  }

  else

  {

  isValid = false;

  }

     return isValid;

  }