# Everlytic Developer Assessment

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| Name |  |
| Date |  |

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 items are accessible by any other class |
| Protected items can be accessed by the class and it derived classes |
| Private items can only be directly accessed by the class to which they belong |

### 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 function argument is passed by reference, which means that a change to it within the function will change the outside variable. In the function $foo is incremented by one which will have $value incremented by one too. |
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### What is wrong with this query: "SELECT \* FROM table WHERE id = $\_POST[ 'id' ]"?

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| The user input (id) is used in the query without being sanitized. |
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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 happens when you make an output before invoking a function that send or modify HTTP headers, functions like header and setcookie. The problem can be avoided by turning on output buffering, but good practice to prevent it is to figure out why HTTP body is output before HTTP header. |
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### 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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| On the line with $this- >bar, $this is used when not in an object context. One would need to instantiate the class before making use of the $this. |
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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

$counter = 1;

while($counter < 101){

if($counter % 3 == 0 && $counter % 5 == 0){

echo "FizzBuzz" ."\n";

$counter++;

continue;

}

if($counter % 3 == 0){

echo "Fizz" ."\n";

$counter++;

continue;

}

if($counter % 5 == 0){

echo "Buzz" ."\n";

$counter++;

continue;

}

echo $counter ."\n";

$counter++;

}

### **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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| It searches, replace and rearranges date string. |
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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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| preg\_replace("/<.\*?>/", "", $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)

{

$word = strtolower($word);

$wordArray = str\_split($word);

$reverseWordArray = array\_reverse($wordArray);

if($wordArray == $reverseWordArray){

return TRUE;

}

return FALSE;

}

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

### 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><?= $message->message\_text; ?></div>

### Answer: I am not sure what the security issue is but I would guess that the message\_text from the database is displayed exactly as obtained. If a hacker manages to smuggle in html elements through the message\_text field, the web page can be defaced :-) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### Write an inner join for the following tables

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| SELECT \* FROM User INNER JOIN Address ON User.UserKey = Address.UsrKey; |
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