

## EECS 1012: LAB #3 – Intro to PHP (Oct 2 – 5, 2017)

1. Read the lab instructions in this document and take the pre-lab quiz for Lab #3 -- the TAs will not mark your lab if you do not show them you have not scored 100% on the pre-lab quiz.

**NOTE: Try to complete the tasks given in this write up before coming to your lab session, the lab must be completed and verified by the TA before the end of the lab session.**

2. If you do not have VirtualBox installed, you can also test out your code using the PHP sandbox at this link. <https://tinyurl.com/phpsandbox>

If you do have VirtualBox installed, use the command terminal to test out your code. See video here: <https://www.youtube.com/watch?v=-GPndJNdm9k>

### 2. GOALS & OUTCOMES FOR THIS LAB

- To learn the basic syntax of PHP
- To familiarize yourself with PHP print statement
- To learn how to use rand() function, variables, and if statements to produce dynamic HTML output

*For Monday's lab, you will not have seen if statements in lecture yet, so please see these "live" PHP examples here. PHP "if statements" are needed for task 2 and 3:*

(if-else statement) <https://tinyurl.com/ycj4n7th>

(if-elseif-else statement) <https://tinyurl.com/y8alj4hx>

### 3. LAB 3 – TASK

1) You are provided a simple HTML page (Lab3.php) with three tasks that all require PHP code. See the next pages for more details.

**[Task 0]** Please change the HTML code that says "YOUR NAME HERE" and type in your full name.

**[Task 1]** is to generate simple random variables and compute the area of a trapezoid. Your PHP program will output the results as HTML that will be displayed on the browser. See more details on page 2.

**[Task 2]** is to do a "rick-roll" for a link. You are to output a link (<a> tag) that contains cat image (<img> tag). 50% of the time, your code will have the link go to the correct video, the other 50% of the time the link will go to a video of Rick Ashley's song "Never Going to Give You Up" (for overseas students - tricking someone to watch this video is known as "rick-rolling"). This task will require an if-else statement.

**[Task 3]** is to modify the CSS style (using inline style) to change the color and font size of some text. Similar to task 2, you need to produce a random variable between 1-3. This task is actually very similar to task 2, but requires an if-elseif-else statement.

### 4. SUBMISSIONS

#### 1) [Manual verification by a TA]

As with labs 1 and 2, when you have completed all tasks, ask the TA to come and verify your code and output.

#### 2) Moodle submission

You will see an assignment submission link on Moodle.

1) Create a **folder** named "**Lab3**" and copy your modified Lab3.php file. Please make sure it is your modified PHP file with your PHP code. To upload, please follow the instructions in the following video that we used for Lab 1:

<https://www.youtube.com/watch?v=stEOh6ntV5o>

STARTING POINT: **Lab3.php**. In the Lab 3 ZIP file, you are given a PHP file that has no PHP code. When you complete your PHP code, your output like the webpage shown below. You can actually run the Lab here: <http://www.eecs.yorku.ca/~mbrown/EECS1012/Lab3.php>

The next pages in this document describe each task.

## Lab 3

**YOUR NAME HERE**

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### Task 1: Area Formula Demo

Area of a trapezoid is  $\text{area} = 0.5 \times (a + b) \times h$

#### Example

$a = 4, b = 9, h = 5$

$\text{area} = 0.5 \times (4 + 9) \times 5$

$\text{area} = 32.5$

### Task 2: Rick Roll

Click for a funny cat video!



### Task 3: Style Modification

PHP is driving me crazy

## TASK 1

Your output should look similar to below, however, the values of the variables will change due to the `rand()` function.

### Task 1: Area Formula Demo

Area of a trapezoid is  $\text{area} = 0.5 \times (a + b) \times h$

#### Example

$a = 4, b = 9, h = 5$

$\text{area} = 0.5 \times (4 + 9) \times 5$

$\text{area} = 32.5$

### EXAMPLE OUTPUT

#### Description of your task.

- 1) You will need three variables: `$a`, `$b`, `$h`. Each variable should be assigned a random number between 1-10. See notes for details on the `rand(min, max)` function.
- 2) Create another variable named `$result` that computes the formula shown above.
- 3) Assume that our variables are `$a=6`, `$b=6`, and `$h=10`. Your PHP code should generate the following output that “injected” into the HTML.

```
<p> <span class="formula"> a = 6, b = 6, h = 10 </span> <p>
<p> <span class="formula"> area = 0.5 &times; (6 + 6) &times; 10 </span></p>
<p> <span class="formula"> area = 60 </p>
```

The output above can be generated using the PHP `print` statement. Note to print out the double-quote, you'll need to use an escape sequence `\`". You should also get into the habit of having a `\n` (line-feed) at the end of your print statements (see lecture notes).

## TASK 2

### Task 2: Rick Roll

Click for a funny cat video!



### Example Output

The above image (please use the image src <https://tinyurl.com/ybafqu2h>) is contained within an link (HTML <a> </a> tag) and is suppose to link to the following Youtube video:

<https://www.youtube.com/watch?v=oqNKD9YVe4U>

Your task is to write PHP that will have a 50% chance of changing the the link to actually go to the following Youtube video: <https://www.youtube.com/watch?v=dQw4w9WgXcQ>

In order to have this “50% chance” you will use a random variable. The easiest is as follows. Generate a random variable with range between 1 and 2. This means the variable will have two values, either 1 or 2.

If the variable is equal to 1, then output the following (correct) link

```
<p> <a href="https://www.youtube.com/watch?v=oqNKD9YVe4U"
target="blank"></a> </p>
```

Otherwise output the follwing (rick-rolled) link:

```
<p> <a href="https://www.youtube.com/watch?v=dQw4w9WgXcQ"
target="blank"></a> </p>
```

This will require you to use an if-statement. If you are in a Monday Lab, we haven’t covered if statements yet, however, they are quite easy. See the lecture notes and links to examples described at the beginning of this lab.

### TASK 3

#### Task 3: Style Modification

PHP is driving me crazy

This task is very similar to task 2. Your task is to modify the style of the text “PHP is driving me crazy”. Specifically, each time your PHP program runs, it should randomly select the color of the text to be one of three choices: *red*, *green*, or *blue*. It should also randomly select the font size of the text to be one of three choices: *0.5em*, *1em*, *3em*. You should be able to determine how to do this task based on how you completed task 3. The links to the examples of the if statements at the top of the lab will help!

The following shows example outputs that your code can generate:

```
<p> <span style="color:red; font-size:1em;"> PHP is driving me  
crazy </span> </p>
```

```
<p> <span style="color:green; font-size:0.5em;"> PHP is  
driving me crazy </span> </p>
```

```
<p> <span style="color:blue; font-size:3em;"> PHP is driving  
me crazy </span> </p>
```

```
<p> <span style="color:blue; font-size:1em;"> PHP is driving  
me crazy </span> </p>
```

**TASK 3 Modification (OPTIONAL):** You can apply even more styles to your text, e.g. font-family, font-weight, text-decoration, etc.