CSE101, LAB 1: GETTING STARTED

First Name:_____ Last Name:_____Roll Number:_____

The purpose of this assignment is to get you started with Python immediately. You will have hands on experience with Python expressions.

In addition to this handout, you need to download two files from Backpack's resource page.

For today's lab you will with one file.

lab1_01.py (Python script)

Create a new directory on your hard drive and name it as lab01 and copy the file in that directory.

This handout has several empty boxes that where you have to write answer for a given question. When you are finished with the lab, you should show your written answers to your lab instructor.

The instructor may ask you a few questions to make sure you understand the material.

There are two ways to run Python. One is to execute "scripts", or files that contain Python commands. The other is to use Python interactively, typing in just one command at a time.

1. The file lab1_01.py is a script. To run a script, you type python, followed by the name of the script, into the command shell. Type

python lab1_01.py

and hit Return. Does anything happen?

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2. Now open up the file lab1_01.py with some editor.

Delete the # character and save the file. Once again, run the script hello1.py by typing "python lab1_01.py". What you do see this time?

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3. To run Python interactively, type the word python by itself and hit Return. You will see several lines of text followed by the symbol >>>. This is the Python prompt. The purpose of the >>> is to let you know that you are currently running Python, and that you are no longer working with files and folders.
At the Python prompt, type

```
>>> 2+5
```

and hit Return (do not type the >>>). What happens?

4. Given radius of circle as 2, write program on console to print area of circle.

2. **Python Expressions**

The following pages have a list of expressions. For each expression, first compute the expression in your head, without using Python. Write down what you think the value is in the second column. If you have no idea, write "?".

Next, use Python to compute the same expression. Write down Python's result in the third column. If the two values are different, you should try to figure out why Python gave the answer that it did. Come up with a reasonable explanation and put it in the final column. In this assignment, you are not graded on being correct so make your best guess at what is happening. For this assignment you can take help of lab instructor

1. Int and Float Expressions

Expression	**Expected value**	**Calculated Value**	**Reason for calculated value**
2 * 4			
3 ** 2			
5 + 7 * 5			
(5 + 2) * 6			
-5 - -4 - -4			
2 ** 3 ** 0			

(2 ** 3) ** 0			
6 / 3			
7 / 4			
7.0 / 4			
7 / 4.0			
16.0 * 0.5			
16.0 ** 0.5			
16 % 2			
17 % 2			
6.2 % 4			

2. **Types and Casting**

Expression	**Expected value**	**Calculated Value**	**Reason for calculated value**
float(6)			
int(6)			
int(7.3)			
float(int(7.3))			
int(-7.3)			
int(-7.7)			
float(9) / 4			
float (9/4)			

3. Comparisons and bool Expressions.

Expression	Expected value	Calculated Value	Reason for calculated value
4 < 5			
4 < 5 and 5 < 4			
True			
true			
True and False			
True and True			
True or False			
not False			
not not True			
not (False and True)			
True or (False and True)			
(6 / 0 == 1) and False			
False and (6 / 0 == 1)			