MEET Y1 - Module 2 - Lab 1

Intro to Data Types

In this lab, you will learn about different data types, including `int`, `float`, `str`, and `bool`, and how to use `type()` to determine what data type something is using **Python** in **IDLE3**.

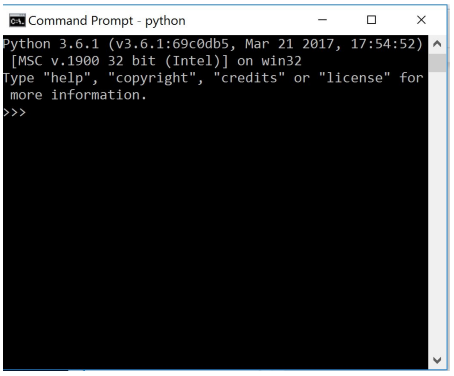
Follow these instructions:

1. Fill in column 2 of the table on the next page by writing what you would expect the output from **Python** to be. If you don't think Python can do something, write error. The first row is filled out as an example.

Expression	Your Guess	IDLE3 Output
`>>> type(259+33)`	integer	`int`
`>>> type(259-33.0)`		
`>>> type(4)`		
`>>> type('4')`		
`>>> type('four')`		
`>>> type(5/2.0)`		
`>>> type(12 > 2*5)`		
`>>> type(color+3)`		
`>>> type('color'*4)`		

2. Open a **Linux** terminal by double clicking on this icon:

3. Type `idle3 &` to open **IDLE3**. A window should pop up.



4. Type each row into **IDLE3** and write what the output is in column 3. Does it match what you thought the output would be?

5. BONUS

What happened when you typed `type(color+3)` into **IDLE3**?

```
>>> type(color+3)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'color' is not defined
```

Python gave you an error because color is not a `str` or anything we have learned so far. In this case, it is a **`NameError`**, because we have not told the program what color is.

6. Now try the following:

```
>>> color = 'blue'
>>> type(color+3)
```

You should see a different error, called a **`TypeError`**. This is because we tried to add a string (`'blue'`) to an integer (`3`). It's like adding a word to a number. We can't do that!

7. What happened when we typed `type('color'*4)`? Why do you think this happened?