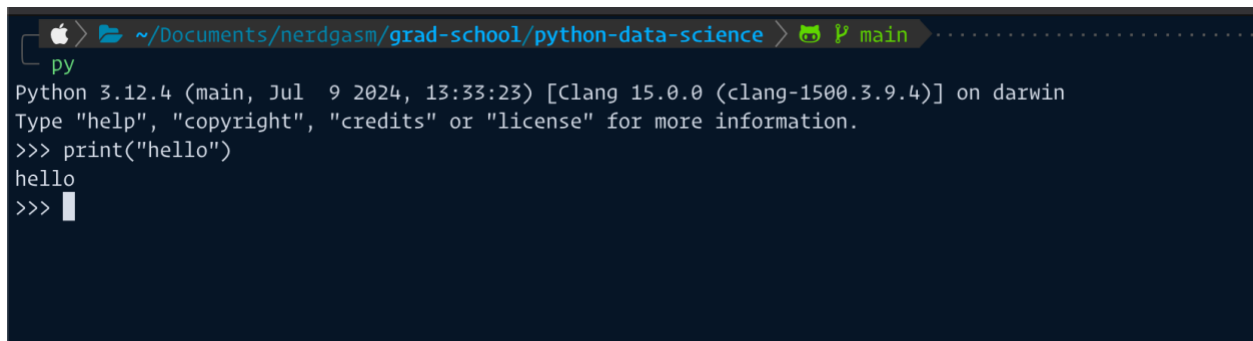


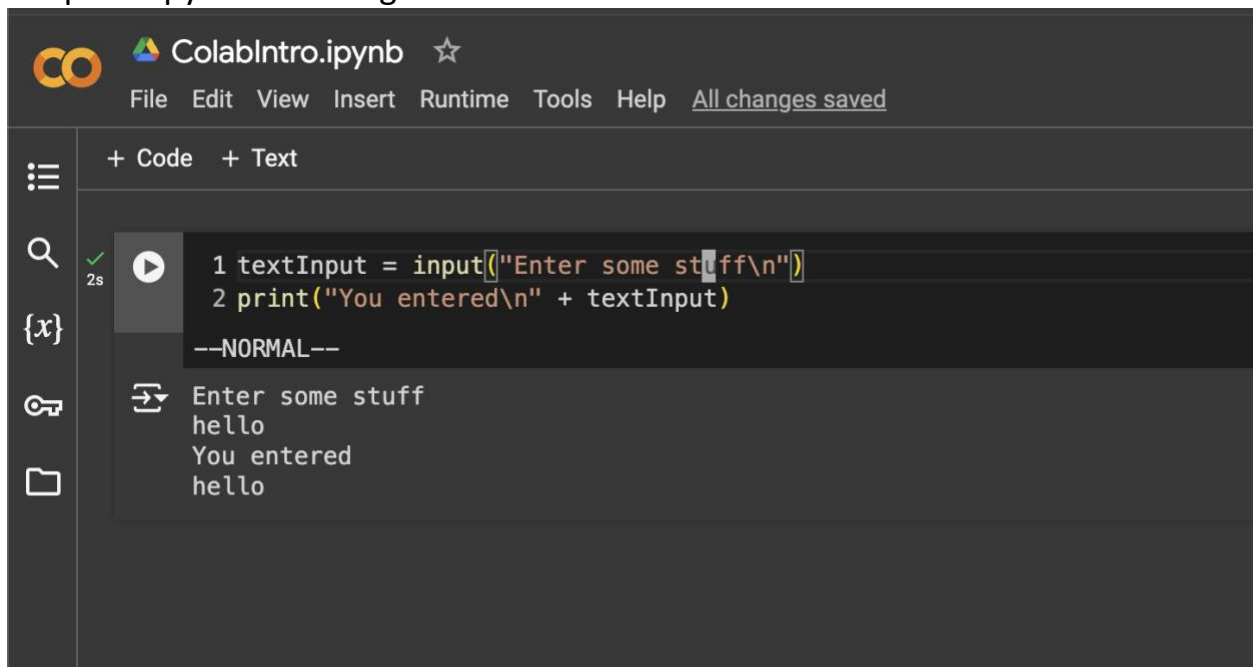
Alexander Garcia
14254931

1.) Output of python installed locally



```
Apple > ~/Documents/nerdgasm/grad-school/python-data-science > main
py
Python 3.12.4 (main, Jul 9 2024, 13:33:23) [Clang 15.0.0 (clang-1500.3.9.4)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> print("hello")
hello
>>> 
```

Output of python in Google Colab



ColabIntro.ipynb ☆

File Edit View Insert Runtime Tools Help [All changes saved](#)

+ Code + Text

```
1 textInput = input("Enter some stuff\n")
2 print("You entered\n" + textInput)
```

--NORMAL--

```
Enter some stuff
hello
You entered
hello
```

2.) Output of all the arithmetic (I have python3 aliased in my terminal to py and use pyenv for version control)

```

[Apple] ~/.config/nvim > main
py
Python 3.12.4 (main, Jul  9 2024, 13:33:23) [Clang 15.0.0 (clang-1500.3.9.4)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> a = int(input("Enter the first value\n"))
Enter the first value
5
>>> b = int(input("Enter the first value\n"))
Enter the first value
8
>>> a + b
13
>>> a - b
-3
>>> a * b
40
>>> a ** b
390625
>>> a / b
0.625
>>> a // b
0
>>> a % b
5
>>> 
```

3.) output of arithmetic in notebook



The image shows a Jupyter Notebook interface with a code cell. The code cell contains 16 lines of Python code. The first two lines define variables `x = 5` and `y = 8`. The next eight lines use `print` statements to display the results of various arithmetic operations: addition (`x + y`), subtraction (`x - y`), multiplication (`x * y`), exponentiation (`x ** y`), division (`x / y`), floor division (`x // y`), and modulus (`x % y`). The output of the cell is displayed below the code, showing the results of each operation. The output is formatted with line numbers corresponding to the code lines. The output for the modulus operation is 5.

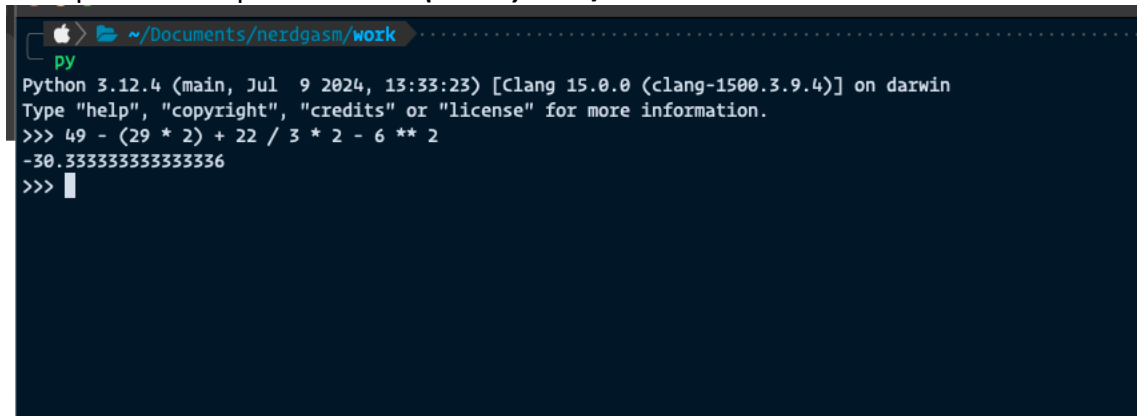
```
+ Code + Text

1 x = 5
2 y = 8
3
4 print(f'results of addition {x + y}')
5
6 print(f'results of subtraction {x - y}')
7
8 print(f'results of multiplilcation {x * y}')
9
10 print(f'results of exponentiation {x ** y} ')
11
12 print(f'results of division {x / y}')
13
14 print(f'results of floor division {x // y}')
15
16 print(f'results of modulus {x % y}')
```

--NORMAL--

```
results of addition 13
results of subtraction -3
results of multiplilcation 40
results of exponentiation 390625
results of division 0.625
results of floor division 0
results of modulus 5
```

4. Output of the equation -> $49 - (29 * 2) + 22 / 3 * 2 - 6 ** 2$



```
py
Python 3.12.4 (main, Jul  9 2024, 13:33:23) [Clang 15.0.0 (clang-1500.3.9.4)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> 49 - (29 * 2) + 22 / 3 * 2 - 6 ** 2
-30.333333333333336
>>> 
```

Order of operations Python uses to get that answer

- 1.) Parentheses $(29 * 2)$
- 2.) Exponents $6 ** 2$
- 3.) Multiplication and division and since there are multiple operations it applies them left to right evaluating $22 / 3$ first then multiplying that result by 2
- 4.) Finally, addition and subtraction is evaluated and again from left to right