Writing Your First Python Code

Estimated time needed: **10** minutes

Objectives

After completing this lab you will be able to:

- Write your basic python code

```
<ul>
    <li>
        <a href="#Say-'Hello'-to-the-world-in-Python">Say 'Hello' to
the world in Python</a>
        <ul>
            <li><a href="#What-version-of-Python-are-we-using?">What
version of Python are we using?</a></li>
            <li><a href="#Writing-comments-in-Python">Writing comments
in Python</a></li>
            <li><a href="#Errors-in-Python">Errors in Python</a></li>
            <li><a href="#Does-Python-know-about-your-error-before-it-
runs-your-code?">Does Python know about your error before it runs your
code?</a></li>
            <li><a href="#Exercise:-Your-First-Program">Exercise: Your
First Program</a></li>
        </ul>
    </li>
```

Say 'Hello' to the world in Python

When learning a new programming language, it is customary to start with an "hello world" example. As simple as it is, this one line of code will ensure that we know how to print a string in output and how to execute code within cells in a notebook.

```
# Try your first Python output

print('Hello, Python!')
```

```
Hello, Python!
```

After executing the cell above, you should see that Python prints Hello, Python!. Congratulations on running your first Python code!

What version of Python are we using?

```
# Check the Python Version

import sys
print(sys.version)
```

```
3.11.3 (main, Jan 18 2024, 19:07:12) [Clang 18.0.0
(https://github.com/llvm/llvm-project 75501f53624de92aafce2f1da698
```

Writing comments in Python

```
# Practice on writing comments

print('Hello, Python!') # This line prints a string
```

```
Hello, Python!
```

```
# Print string as error message

frint("Hello, Python!")
```

```
---------------------------------------------------------------------------
-----
NameError                                 Traceback (most recent call
last)
Cell In[4], line 3
      1 # Print string as error message
----> 3 frint("Hello, Python!")

NameError: name 'frint' is not defined
```

The error message tells you: where the error occurred (more useful in large notebook cells or scripts), and what kind of error it was (NameError) Here, Python attempted to run the function frint, but could not determine what frint is since it's not a built-in function and it has not been previously defined by us either.

```
# Try to see built-in error message

print("Hello, Python!)
```

```
  Cell In[5], line 3
    print("Hello, Python!)
          ^
SyntaxError: unterminated string literal (detected at line 3)
```

Does Python know about your error before it runs your code?

Python is what is called an interpreted language. Compiled languages examine your entire program at compile time, and are able to warn you about a whole class of errors prior to

execution. In contrast, Python interprets your script line by line as it executes it. Python will stop executing the entire program when it encounters an error (unless the error is expected and handled by the programmer, a more advanced subject that we'll cover later on in this course).

Try to run the code in the cell below and see what happens:

```
# Print string and error to see the running order

print("This will be printed")
frint("This will cause an error")
print("This will NOT be printed")
```

```
This will be printed

---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[6], line 4
      1 # Print string and error to see the running order
      3 print("This will be printed")
----> 4 frint("This will cause an error")
      5 print("This will NOT be printed")

NameError: name 'frint' is not defined
```

Exercise: Your First Program

```
# Write your code below. Don't forget to press Shift+Enter to execute the cell
print("Hello, world!")
```

```
Hello, world!
```

```
# Write your code below. Don't forget to press Shift+Enter to execute the cell
print("Hello, world!") # Print the traditional hello world
```

```
Hello, world!
```

```
# Write your code below. Don't forget to press Shift+Enter to execute the cell
17
```

```
17
```

Congratulations, you have completed your first lesson and hands-on lab in Python.

Author

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Other contributors

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```
toggle## Change Log

toggle|  Date (YYYY-MM-DD) |  Version | Changed By  |  Change Description |
```

```
toggle| 2023-10-30 | 2.2 | Abhishek Gagneja| Updated instructions |
toggle| 2022-01-10  | 2.1  | Malika  | Removed the readme for GitShare| toggle| 2020-08-26  | 2.0  | Lavanya | Moved lab to course repo in GitLab |
```