

Programming Foundations in Python

Adapted From:
CMSC 201

Computer Science I for Majors

Lecture02a – Intro to Python

Last Class We Covered What?

Any Questions from Last Time?

Today's Objectives

- To start learning Python
- To learn about the Python programming environment
- Written programs vs Python interpreter

Python

- Python is a widely used language
 - General purpose
 - High-level language
- Emphasizes code readability
 - More streamlined than some other languages

Python Interpreter

Python Interpreter:

<https://repl.it/repls/UnpleasantGlaringBooleanvalue>

Python Shell:

<https://www.python.org/shell/>

“Hello World!”

- In Python:

```
print("Hello World!")
```

- In the C++ programming language:

```
#include<iostream>
int main() {
    std::cout<<"Hello World!\n";
}
```

Written Programs vs Python Interpreter

We Started Python Today!

- Two ways to use Python
 - You can write a program as a series of instructions in a file and then execute it
 - You can also test simple Python commands in the Python interpreter

Use the interpreter to help you test things

Written Programs

- Create, write, and save a Python file (.py)
- File is run via the command line
`python myProgram.py`
- File must be complete to run correctly
- Program cannot be edited on the fly
 - Must be exited, file re-opened, changes made, file saved and closed, and then re-run the program

Python Interpreter

- The “interactive” interpreter evaluates each individual line of code as it’s typed in
- Type “**python**” to launch the interpreter

>>> print(“Hello”)

>>> is where the user types their code

Hello

>>> 4 + 7

11

>>>

lines without a “>>>” are Python’s response