

MODULE 0

INTRODUCTION

What is Code?

Instructions for the computer

Languages

There are many languages used for coding, some of the most popular are:

- Python (what we'll be learning)
- Java
- C, C++
- Javascript

How does code work?

- Code is an abstraction or representation of lower level commands that are easier for the computer to run. When you run a program the code itself is made into something that your computer can better understand then ran on your hardware.



What is python?

- Created in 1991
- Easy to learn and use
- Multipurpose: Web Development, Scientific & Statistical support, IoT
- Extensive library support
- Open source
- Run by the Python Software Foundation



Other Vocab

Memory

- Random access memory (or cache memory) of the computer
- good for short-term storage

Disk

- the hard drive in your computer
- good for long term storage

Developer

- Someone who writes code



Variables

Naming – Rules

- One word (no spaces in variable names)
- Must start with a letter
- Can't use reserved words

Naming conventions

A good variable name is:

self descriptive – it explains what it's purpose is

consistent – matches the patterns of other variables names in your program

concise – overly long variable names can be confusing

Try it out

1: Write a program to print your name

2: Write a program that prints the results of the following expressions:

- $7 + (2 - 3) + -1^3$
- $\sqrt{3^2 + 4^2}$
- $\sqrt[3]{8}$

3: Write a program that prints the remainder of $\frac{2^{31} - 1}{2}$