

Python for Kids

Lecture 1

What are we covering today

- ▶ What is Programming ?
- ▶ Practice Python
- ▶ Print Statement
- ▶ Variables
- ▶ Data Types - Intro

What is Python

- ▶ It's a programming language, its instructions to tell computer what to do.
- ▶ Just like English, programming language as rules.
- ▶ Python is dynamically typed, means the computer will let you type and check if it can execute when its running.

Practicing Python

- ▶ Install Python on a computer
 - ▶ <https://realpython.com/installing-python/>
- ▶ Practice on the web
 - ▶ <https://colab.research.google.com/notebooks>

Print Statement

- ▶ Simplest command is python is to print something.
- ▶ Simply type `print("Text to be printed")` and run it and the computer will know it was to print Text to be printed on the screen.
 - ▶ Try it out !

Variables

- ▶ Like we store things in our memory, variable let a program hold something in its memory.
- ▶ In Python to store a variable you can simply give the variable a name and give it a value, like
 - ▶ `num = 1`
 - ▶ `str = "This is a string variable"`
- ▶ To print these, you can tell the computer to simple print the variables. Like this:
`print(num)` or `print(str)`
- ▶ Try it out yourself !

Data Types

- ▶ These are the building blocks of the language, like lego pieces you can join these with some tools provided by the python to build a program.
- ▶ Today we will look into two basic ones.
 - ▶ Strings
 - ▶ Integers or Numbers.

Fun with Numbers

- ▶ There are two types, Integer (1, 3, 1234, 456) and Floating point (anything with decimals)
- ▶ Computers can do maths quickly, so we can use python to do calculations.
 - ▶ 1+3 or 1-5 or 2*3(* represents multiplication)
 - ▶ We will cover division in next lecture. (you will also have it in HW)
- ▶ You can assign numbers to variable and do the same.
 - ▶ `a = 5; b = 20; print(a*b)`
- ▶ Try it out !

Fun with Strings

- ▶ String have “” or ‘’ and you can put any characters in it.
- ▶ To define a string variable do : `str = 'Hello'`
- ▶ You can get a character from a string by referencing to its index
 - ▶ Character in str: H e l l o
 - ▶ Index of those character: 0 1 2 3 4
- ▶ So to get say e , we can do : `print (str[1])`
- ▶ If you want to get all characters in string from beginning to 3rd character, you can type `print (str[0:3])`
 - ▶ Why 3 and not 2?
- ▶ To get the length of string you can do : `len(str)`