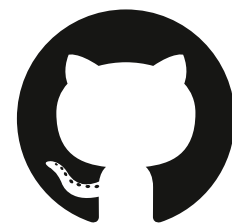


# Introduction to Programming

Lesson 1: Introduction & Variables

**Python**



**Lesson Content**

**1**

# **Agenda Today**

**An Introduction**

**Variables**

**Practice**

**2**

# **Instructor**



**therealgg13**

**4th year CS student**

**previously a swim  
instructor**

**3**

# **Outline of content**

**Variables - booleans, strings, ints**

**if/else statements**

**Functions - print versus return**

**Lists - for/while loops**

# **Outline of content**

**Object-Oriented Programming**

**Data Structures - Stacks, Queues**

**Recursion**

**Trees/search algos**

**5**

# Content Delivery

**online** *synchronous,*  
**with a** *recording.*

6

**Lecture Slides**

**available upon  
request**

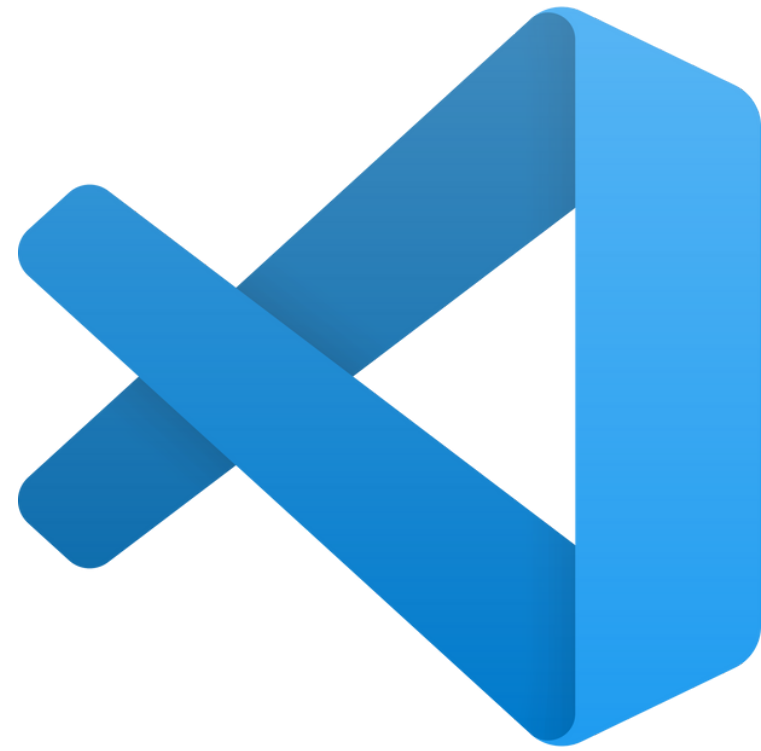
**7**

# Setup Python

8



# Setup Python - Tools



**Visual  
Studio Code**



**Python**

# **What is Python?**

**10**

# What is Python?



**It's a snake!**

(what a cutie)

**11**

# What is Python?



**nah, it's this!**

a language you can program in.

(ik... way less cuter :())

**12**

# **What is Python?**

**Dynamic**

**OOP**

**Scripting**

**13**

# Advantages of Python

**Simple Syntax**

**Variable**

```
x = 5
```

```
def foo(x: int) -> int:  
    return x + 1
```

```
foo(4)
```

**Function**

**Function  
Call**

**14**

# Variables

**15**

# Variables

## Definition

**Variables are data values that can change when the user is asked a question, for example, their age.**

## More:

<https://www.bbc.co.uk/bitesize/guides/zc6s4wx/revision>



# Variables in Python

```
sample_string = "" # string
sample_float = 0.03 # float
sample_int = 2 # integer
sample_bool = 0 # boolean (0 = false, >1 = true)
sample_bool2 = True # boolean (True, False)
# ... many others
```

**DEMO**

**18**

# Questions?

**Next Time**

**Strings & Booleans**

**If/else statements**

**20**