What is a Python?

Python is a **text based programming language** that can be used to create small programs, web applications, games and even search engines like Google and YouTube!

Python is easy to learn and is a great beginner language.

Print statements

In order to display text in the **shell** you need to use a **Print** statement.

```
print ("Hello World")
print ("I am a programmer")
```

This is the output:

```
Hello World
I am a programmer
```

Input statements

Using **var = input ()** we can ask a user to input some information.

We can then **print** this back to the console window.

```
userName = input("what is your name?")
print ("Welcome ", userName)
```

userName is a **variable.** This means we can change the information stored. We can also name it whatever we want.

Syntax

Syntax is what we call the format that the code needs to be in, in order to be processed correctly.
If it is not in the correct format then the code will not work.

```
Traceback (most recent call last):
  File "C:/Python33/a.py", line 2, in <module>
    prin (greeting)
NameError: name 'prin' is not defined
```

Python tells us where the error is and what type it is.
Here it says the line the error is on
Here it says what type of error.

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Key Words

Python	Programming	Print	Input	Output

| Syntax	IF/ ELIF	String	Integer	Float	Variable

IF statements

IF statements can be used to select different options in a program depending on a condition. Also known as **selection.**

```
question = input("Are you revising?")
if question == "yes":
    print ("Well done!")
elif question == "no":
    print("Oh dear!")
else:
    print("I don't understand")
```

Variables

A variable is something that can be **used to store information**. The information that is stored can be changed.

Data types

Different types of data are stored in variables as different **data types**. There are **three** main data types:
String, Integer & **Float**

String
A type of variable for storing **text** "strings" **e.g.** "Hello World"
```
string = str("This is a string")
```

Integer
A type of variable for storing **whole numbers**
  e.g. 10, 182, -44
```
integer = int("This is an integer")
```

Float
A type of variable for storing **decimal numbers**. Also known as a **real** number
  e.g. 2.5, 5.05, 3.14
```
decimal = float("This is a decimal")
```

Executing a program

In order to run or **test** a program written in Python the user needs to go to **Run** and then **Run Module.**

Run	Options	Window
Python Shell		
Check Module	⌥X	
Run Module	F5	
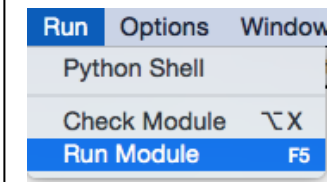
Alternatively, you could press the **F5** button on the keyboard.