

Python

Session 1

By Declan Fox
With thanks to Al Sweigart

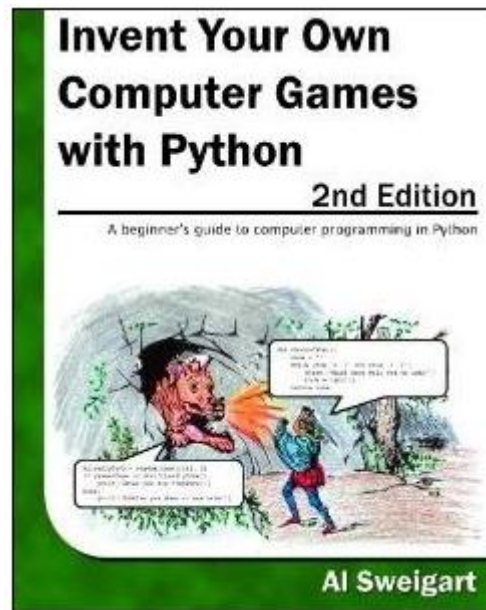
“Above all, be cool.”

Wi-Fi Name: CoderDojo

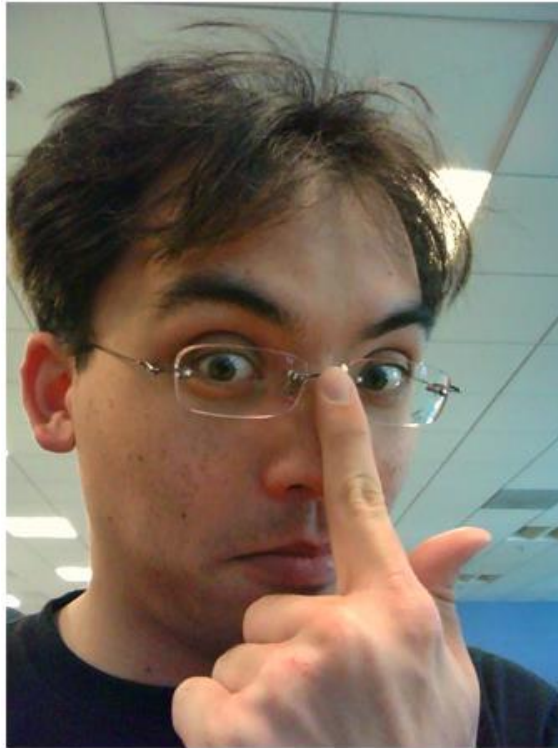
Password: coderdojowireless

Website: <http://cdathenry.wordpress.com/>

We will be following the book “Invent your own computer games with Python” by Al Sweigart.



Albert Sweigart (but you can call him Al), is a software developer in San Francisco, California he is originally from Houston, Texas.



The book is free online at
<http://inventwithpython.com>

Installation

Go to

<http://www.python.org/>

click on download

Download [Python 3.3.2 Windows x86 MSI
Installer](#)

When this has downloaded click on it to install.

Programming Languages

Input, Output & Store Data

- E.g. text, numbers

Operate on Data

- E.g. add numbers, change text

Loops

- Repeat commands several times

Decisions

- Do something IF something else is true

IDLE

- IDLE stands for **I**nteractive **D**eve**L**opment **E**nvironment.
- The window that appears when you first run IDLE is called the interactive shell.
 - A shell is a program that lets you type instructions into the computer.

Try typing some of these math problems into the shell, pressing Enter key after each one.

$$2+2+2+2+2$$

$$8*6$$

$$10-5+6$$

$$2 + 2$$

$$10 / 2$$

Math Operators

$2 + 2$	addition
$2 - 2$	subtraction
$2 * 2$	Multiplication
$2 / 2$	division



Storing Values in Variables

spam = 15



types of numbers in Python

int which is an integer example 3, 4, 7

float which is a floating point number 3.4, 7.2, 5.0

strings

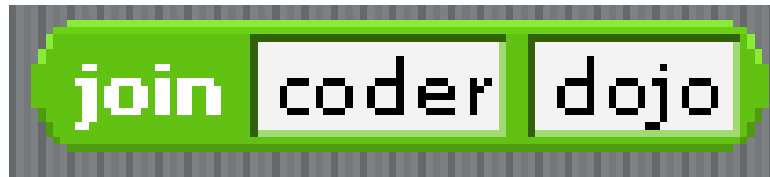
Another important data type is a string which are pieces of text.

```
spam = 'hello'
```

String concatenation

Complicated way of saying you can join string together using the + operator.

'coder' + 'dojo' will give you 'coderdojo'



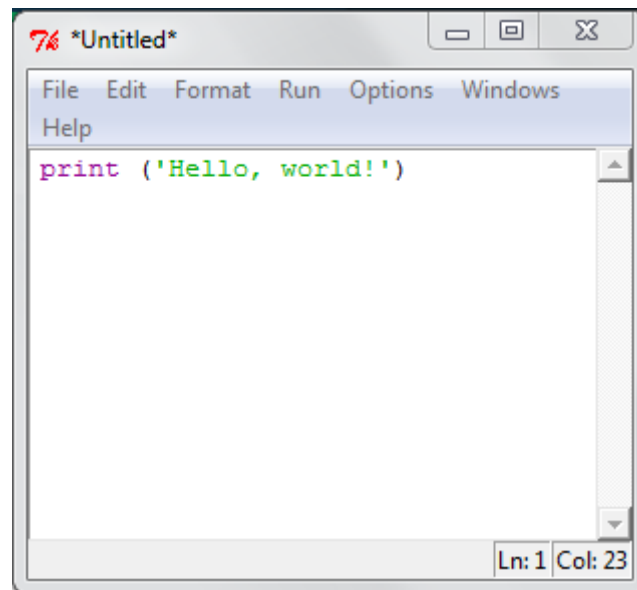
Let's write our first program!

To write a programme we need to use the IDLE file editor.

Click on the **File** menu at the top of the Python Shell window, and select **New Window**. A new blank window will appear for us to type our program in.

This window is the **file editor**.

Our first program



To run our programmes we first have to save them.

Click on File then Save As... save this as hello.py

To run click on Run then Run Module or press the F5 function key.

#This programme says "Hello, World!"

This line is a comment

Comments are used to explain the code to yourself or to anybody else who looks at it

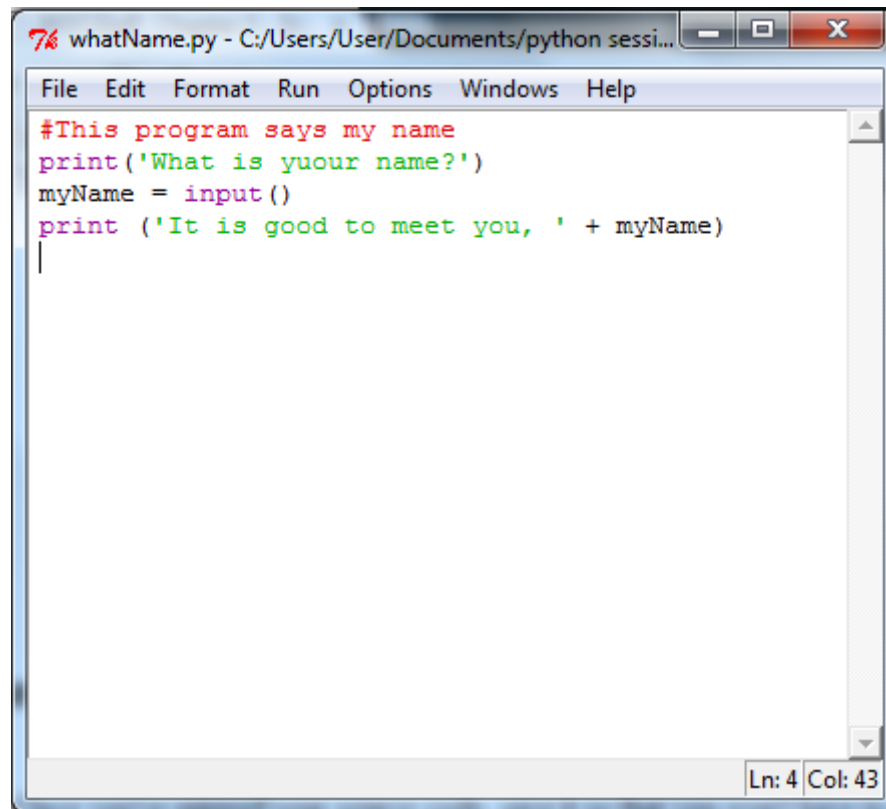
```
print ('Hello, World!')
```

This line calls the print function

Whatever is to be printed goes inside the parentheses

We use parentheses to make it clear we are talking about a function called print not a variable called print

Input()



The image shows a screenshot of a Python IDE window titled "whatName.py - C:/Users/User/Documents/python sessi...". The window has a menu bar with "File", "Edit", "Format", "Run", "Options", "Windows", and "Help". The code editor contains the following Python code:

```
#This program says my name
print('What is yuour name?')
myName = input()
print ('It is good to meet you, ' + myName)
```

The code is color-coded: comments are red, strings are green, and keywords and variables are purple. The cursor is at the end of the fourth line. The status bar at the bottom right shows "Ln: 4 Col: 43".

```
myName = input()
```

This line has an assignment statement with a variable `myName` and a function call `input()`

When `input()` is called, the program waits for the user to enter text.

The text string that the user enters (your name) becomes the function's output value