Learning to Code with Python

# Module 1 Getting started

## Real world examples of projects that use Python

* [Industrial Light and Magic](https://www.python.org/about/success/ilm/) uses Python to help with image processing and lighting special effects
* [ForecastWatch.com](https://www.python.org/about/success/forecastwatch/) uses Python to help with weather forecasts
* [DevNet](https://www.python.org/about/success/devnet/) uses Python to aggregate news feeds
* A student in the UK made a desktop [dinosaur roar](http://www.raspberrypi.org/boris-the-twitter-dino-bot/) every time it was mentioned on twitter with Python and Raspberry Pi

## How to install the tools to code in Python

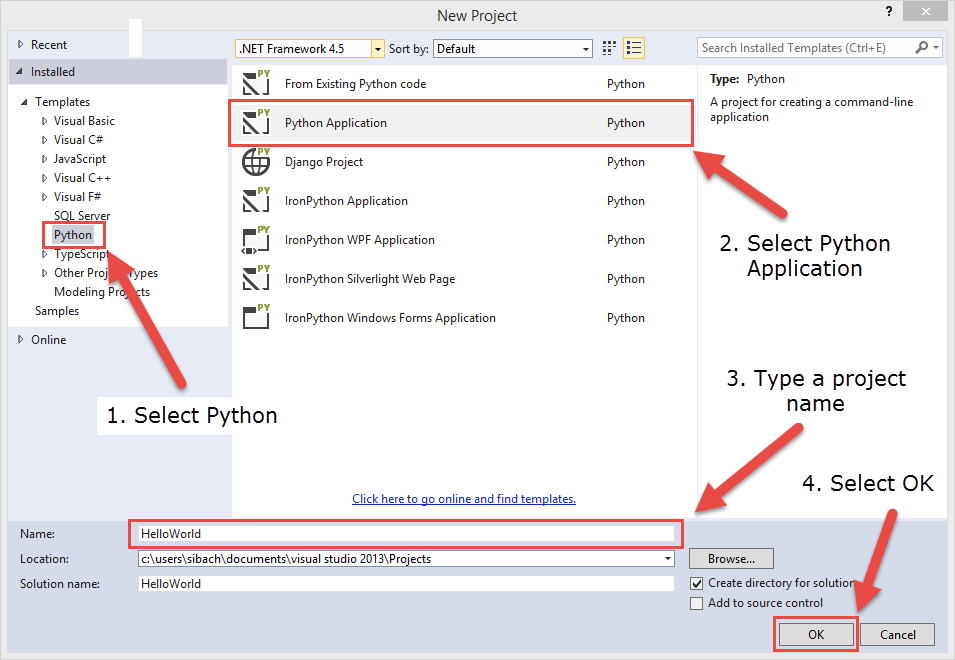
The [installation steps](https://pytools.codeplex.com/wikipage?title=PTVS%20Installation) are explained at the Python Tools for Visual Studio website

1. Install [Visual Studio 2013 for desktop](http://www.microsoft.com/en-us/download/details.aspx?id=40787) (free)
2. Install [Visual Studio 2013 Update 2](http://www.microsoft.com/en-us/download/details.aspx?id=42666) so you have the latest features
3. Install [Python Tools for Visual Studio](https://pytools.codeplex.com/releases/view/119891)
4. Install the [Python 3.4 interpreter](https://www.python.org/ftp/python/3.4.1/python-3.4.1.msi)

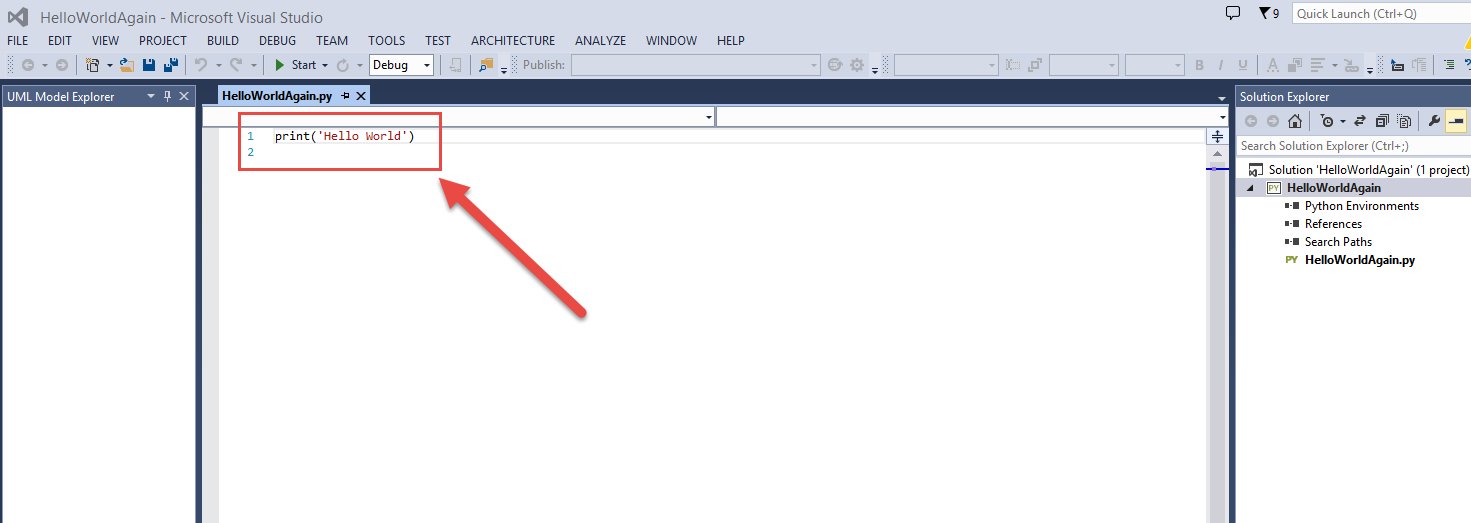
## How do you create a Hello World project to test your installation?

Start Visual Studio

1. From the top menu select **File | New | Project**
2. Select **Installed | Templates | Python**
3. Select the project type: **Python Application**
4. Type in a name for your project: ***HelloWorld***
5. Select **OK**

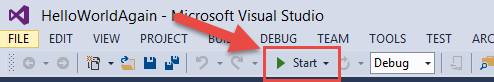


After you select OK you will see the code editor window appear on the screen with a single line of code



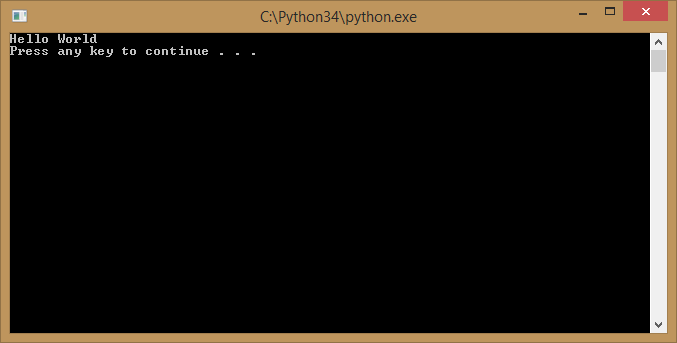
That line of code is Python code that will print the words ‘Hello World’ on the screen

To run the program you can either use the function key F5, or you can select **Debug| Start Debugging** from the menu, or you can press the Start Debugging button in the toolbar.

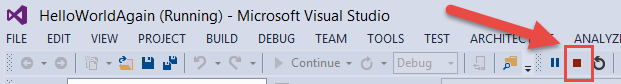


When you run the program, if you see the following output, then you have successfully installed Visual Studio and the Python Tools for Visual Studio, and you are ready to code!

*NOTE: If you got an error message saying something about not being able to find the interpreter, then it is possible Visual Studio can’t find it. You can find instructions on how to tell Visual Studio how to locate the interpreter manually* [*here*](http://pytools.codeplex.com/wikipage?title=Selecting%20and%20Installing%20Python%20Interpreters)*. Just scroll down to the part of the page that says “Hey, I already have an interpreter on my machine, but PTVS doesn’t seem to know about it”. Follow the instructions then try to run your program again.*



To exit the program, you can press any key to continue as indicated in the displayed window, or you can use the function key SHIFT+F5, or you can select **Debug | Stop Debugging** from the menu, or you can press the Stop Debugging button in the toolbar.



You are now a programmer!

# Module 2 Displaying Text

## Print

Text is displayed on the screen using the print statement. The string to be displayed can be enclosed in single or double quotes.

**print("Hickory Dickory Dock! The mouse ran up the clock")**

**print('Hickory Dickory Dock! The mouse ran up the clock')**

## Displaying Text over multiple lines

You can use multiple print statements

**print('Hickory Dickory Dock!')**

**print('The mouse ran up the clock')**

You can use triple quotes

**print('''Hickory Dickory Dock!**

**The mouse ran up the clock''')**

You can use special characters to indicate a new line

**print('Hickory Dickory Dock!\nThe mouse ran up the clock')**