

January 6, 2019

Foundations of Programming: Python

Assignment 01

Creating a Python Script

Introduction

In this paper I will be going over how I created a Python Script with the instructional help of Randal Root, our Professor. There will be a brief overview of the benefits of using this computer language and instructions on where/how to download Python. I will go over on writing the script along with my observations while doing this assignment. I hope this will help future beginning programmers on their first script in Python.

Benefits of Python

Python is a very easy to use programming language that has companies like IBM, Google, Instagram, NASA, Disney, to name a few, using it!

Benefits of Python include:

- 1) Python can be used to develop prototypes, and quickly because it is so easy to work with and read.*
 - 2) Most automation, data mining, and big data platforms rely on Python. This is because it is the ideal language to work with for general purpose tasks.*
 - 3) Python allows for a more productive coding environment than massive languages like C# and Java. Experienced coders tend to stay more organized and productive when working with Python, as well.*
 - 4) Python is easy to read, even if you're not a skilled programmer. Anyone can begin working with the language, all it takes is a bit of patience and a lot of practice. Plus, this makes it an ideal candidate for use among multi-programmer and large development teams.*
 - 5) Python powers Django, a complete and open source web application framework. Frameworks - like Ruby on Rails - can be used to simplify the development process.*
 - 6) It has a massive support base thanks to the fact that it is open source and community developed. Millions of like-minded developers work with the language on a daily basis and continue to improve core functionality. The latest version of Python continues to receive enhancements and updates as time progresses. This is a great way to network with other developers. (pythonforbeginners, <https://www.pythonforbeginners.com/learn-python/benefits-of-learning-python/> 2019)(External site).*
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Where and how to download Python

Python is available anywhere and is free to download. I went to www.python.org to get my version of python. I went to the download section and chose the Windows version for Python as shown in Figure 1. Now you might be running on a Mac or other operating systems so choose accordingly.



Figure 1. Download section on python.org

I then chose the latest python release that I saw which was Python 3.7.2 and download the Windows x86-64 executable installer(Figure 2).

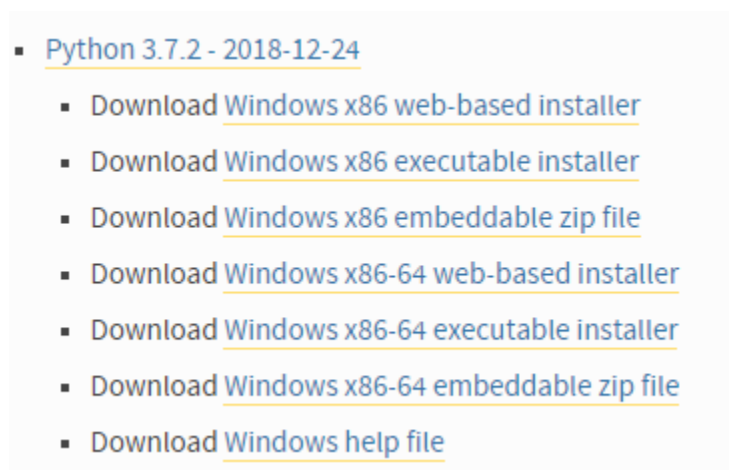


Figure 2. Showing the newest python release of 3.7.2

Now that you have chosen the right python for your system you are ready to download. Make sure though you add python to PATH (Figure 3).



Figure 3. Shows the PATH box being checked

I found that the *PATH* is an environment variable in Windows. It basically tells the command line what folders to look in when attempting to find a file.

(stackoverflow, <https://stackoverflow.com/questions/34900042/why-would-i-add-python-to-path>, answered by SuperBiasedMan) (External site)

What that means is it makes it easier to find a file that you have written in python when you are looking for it. This will help you in the future when you are looking for files moving forward with this class. After I completed the following requirements to download Python, I was ready to start my first script.

Writing my first script and observation

I am now ready to write my first script in python. I went to the python in Windows and opened the IDLE. IDLE is a python environment where you can write and execute scripts. I followed the videos that Professor Root had us watch to complete my tasks.

<https://www.youtube.com/playlist?list=PLfycUyp06LG9OVfidlxwfi7JYRhq83PN> (external site)

Here is what my first script looks like and the output on the command prompt. Figures 4 and 5.

Figure 4. Code in python

Figure 5. Output in the Command Prompt

I initially ran the first line of the code “This is a test!” on the IDLE page. It has the same similarities of the command prompt, but on your desktop so you don’t have to look for it on windows. It makes sense to know how to do both CLI and a GUI interface to get used to working in both environments. I found that most python programmers, if not all, know how to work in the command prompt and do most of their file search and uploads when they use GITHUB to upload and download code. I have been told this will be an important way of learning python for the future.

This was a fairly easy task and will be the easiest moving forward with the class. This is very similar to the “Hello World!” test done in numerous other examples, but everyone has their own style and versions of how to accomplish their first script in python.

Summary

Python, I have found, is the easiest language for me to learn. I like the benefits of using python and how powerful and simple it can be. The steps to download python were very simple and accessing that

information was very uncomplicated. Professor Roots video were very easy to follow in helping with this first assignment and getting my First python script done. I know it will just be time to get used to using the command prompt by practice and immersing myself in the python world, such as using IDLE.