

# An Introduction to STEM Programming with Python 3

## Bonus Chapter 5 Using IDLE

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## Bonus Chapter Five — Using IDLE

### Introduction

Intro text

### Objectives

Upon completion of this chapter's exercises, you should be able to:

- Blah de blah.
- Baz and Barf.

### Prerequisites

This chapter has no prerequisites. If the IDLE IDE is being used in the classroom, this should be introduced before Chapter 1.

### B5A — What is IDLE?

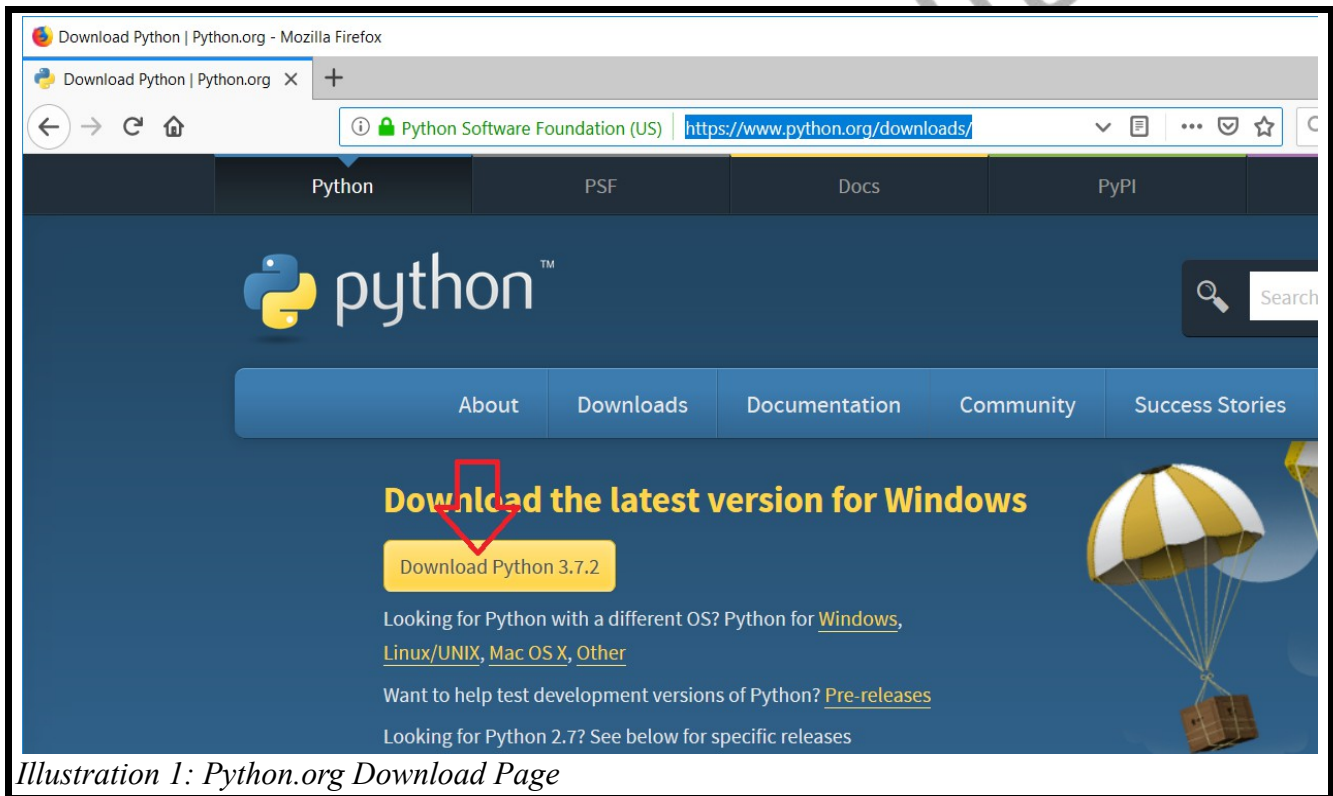
| IDE                                                                                                                                                                                                                                                                            | Concept |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <a href="https://en.wikipedia.org/wiki/Integrated_development_environment">IDE</a> – Integrated Development Environment<br><br><a href="https://en.wikipedia.org/wiki/Integrated_development_environment">https://en.wikipedia.org/wiki/Integrated_development_environment</a> |         |

| IDLE                                                                                                                                                                                                                                                                                                                                                  | Application |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Integrated Development and Learning Environment ( <a href="https://docs.python.org/3/library/idle.html">IDLE</a> ) is a simple IDE for learning Python. It is cross platform and will run under Windows, MacOS, LINUS and other systems.<br><br><a href="https://docs.python.org/3/library/idle.html">https://docs.python.org/3/library/idle.html</a> |             |

## B5B — Starting IDLE

The following instructions and images are from a 64-bit installation of Windows 10. Your actual computer may look somewhat different and you may need to make adjustments.

You must first have Python installed on your computer. You can find a link to the Web installer at <https://www.python.org/downloads/>. On the Download page you will find a button that will allow you to download and install a current version of Python 3 on your PC. You may need to have your administrator load this on your computer if you do not have administrative rights.

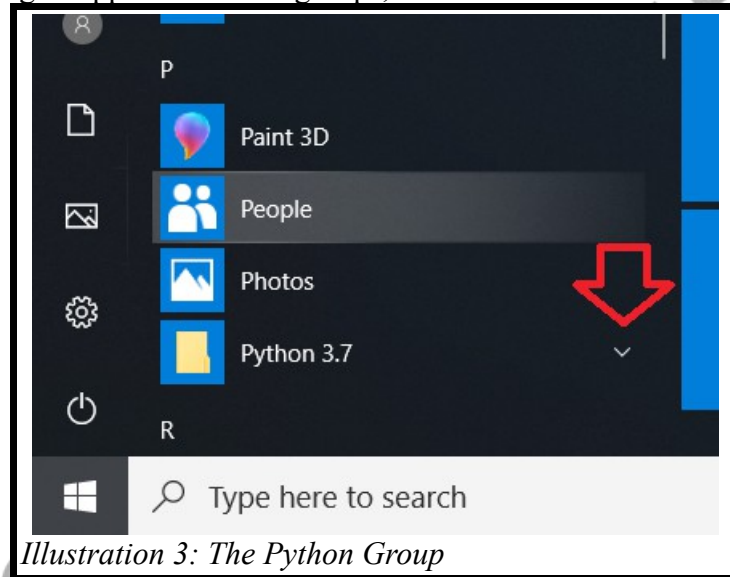


*Illustration 1: Python.org Download Page*

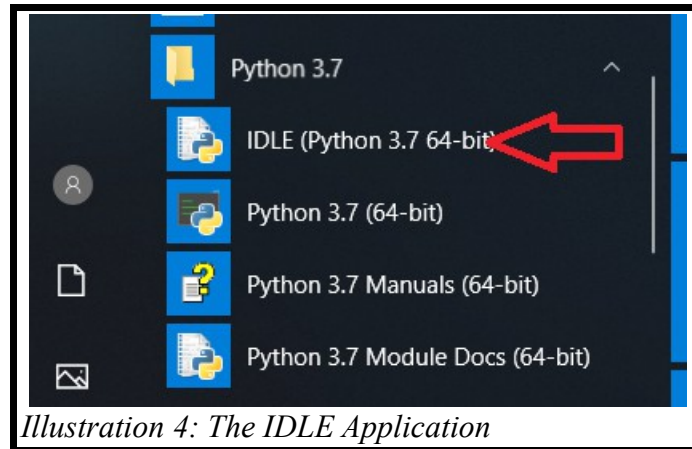
Once you have downloaded and installed Python, it is time to get started with IDLE. To open IDLE, go to the Windows button on the bottom left-hand corner of your screen and click.



In the alphabetical listing of applications and groups, scroll down to the "P"s and open up Python 3.



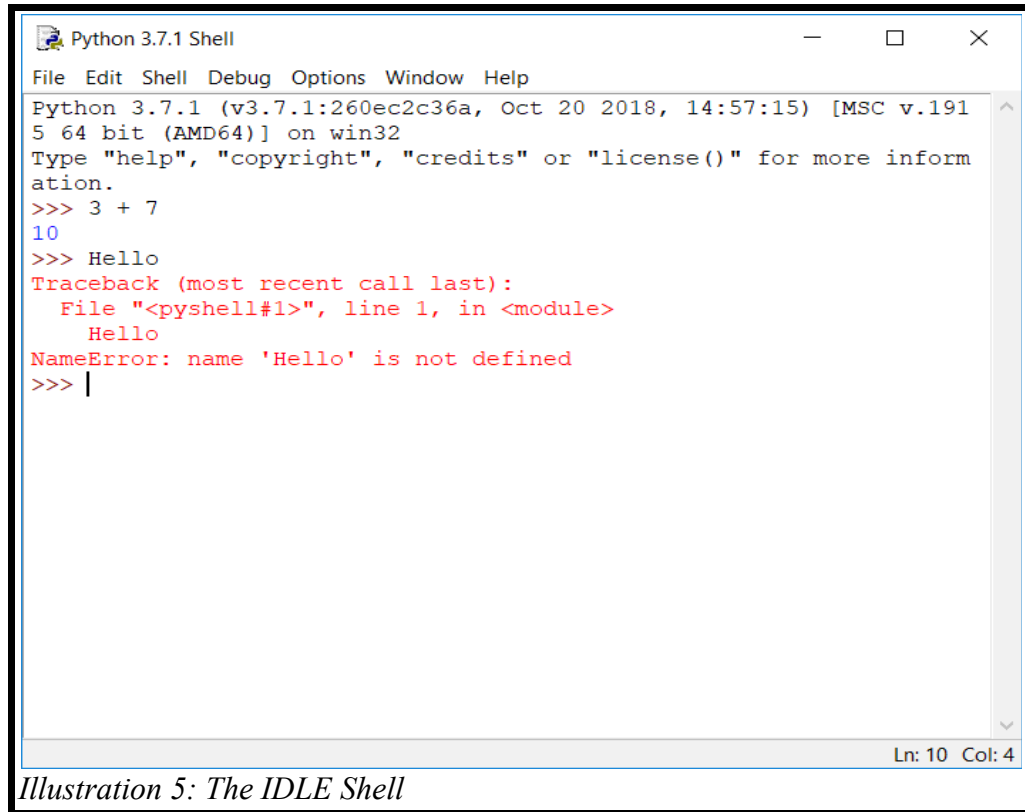
There are several application icons in the Python 3 group, but the one you want is named IDLE. Click on it and the IDLE shell window will open.



*Illustration 4: The IDLE Application*

## B5C — The IDLE Shell

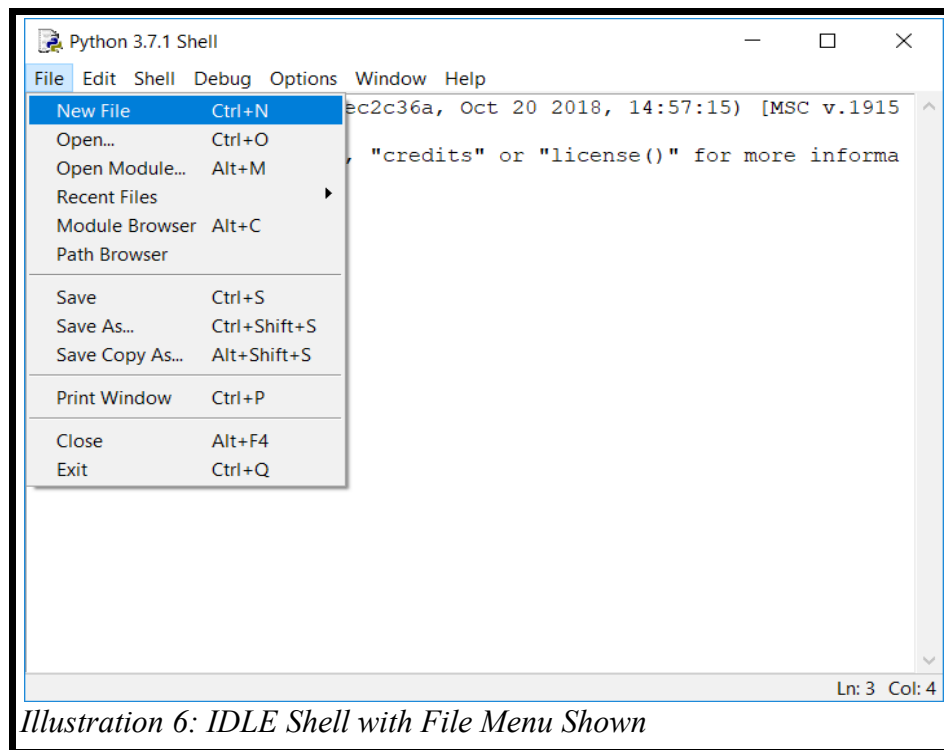
When the IDLE application, you will be shown the "Shell" window. The shell is where you will type in Python statements directly; see the text output of your programs; and see error messages about your programs.



*Illustration 5: The IDLE Shell*

In the shell you may type in Python statements and expressions. These will be executed immediately, unless they are part of a suite of statements. Suites are executed when a blank line is entered.

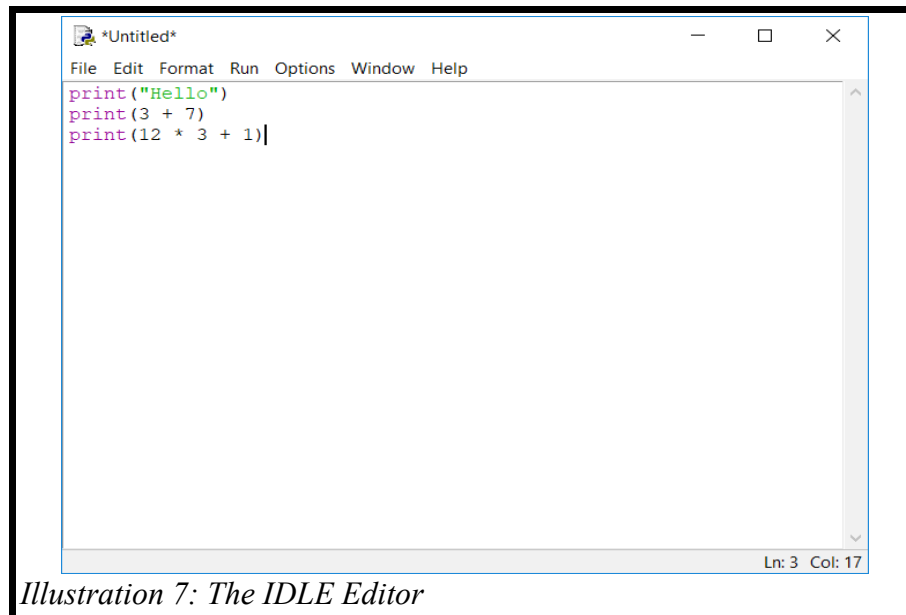
From the shell, you may use the File menu to open Python programs that you have created with the editor, or create a new blank editor window.



*Illustration 6: IDLE Shell with File Menu Shown*

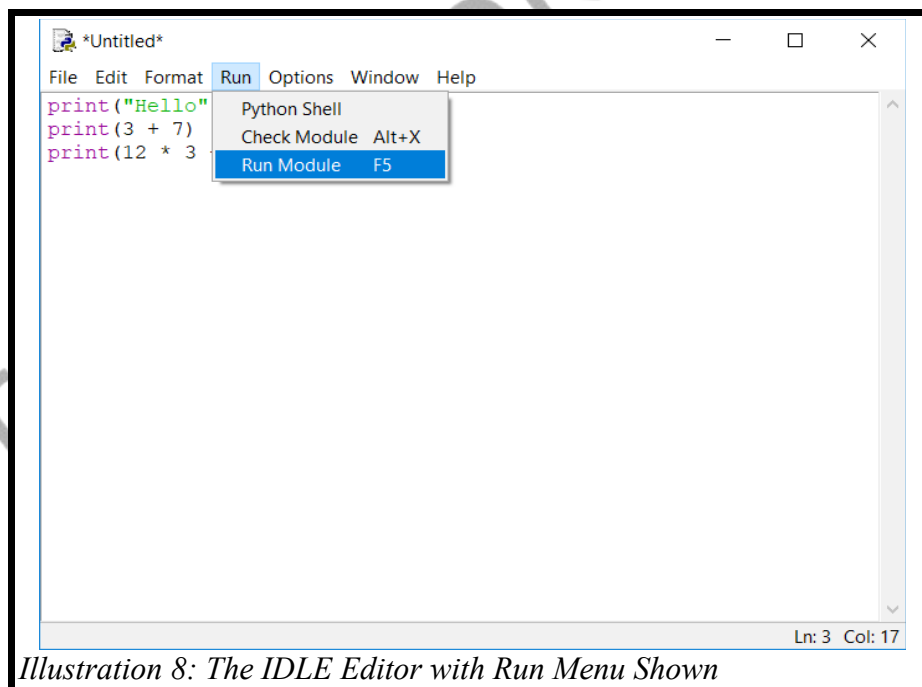
## B5D — The Editor

After you choose "New-File" from the Shell an empty editor window will be displayed. It is in this window that you can type your python program. You will see that in the top bar of the editor the name "Untitled" will be displayed. If you opened an existing file, the name of that source file will be displayed. A programmer may have several editor-windows open at the same time, but be careful as this may become very confusing.



*Illustration 7: The IDLE Editor*

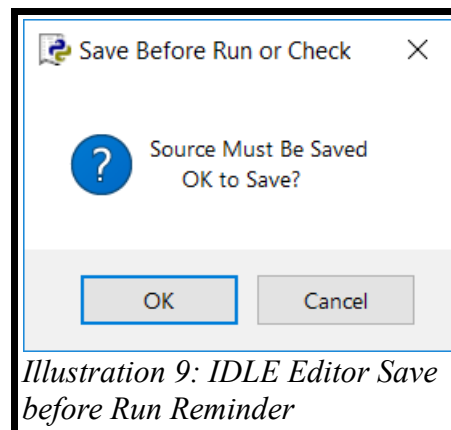
Once you have typed in your code and you are ready to execute it, you may click on the Run menu then Run Module or you may press the F5 function key.



*Illustration 8: The IDLE Editor with Run Menu Shown*

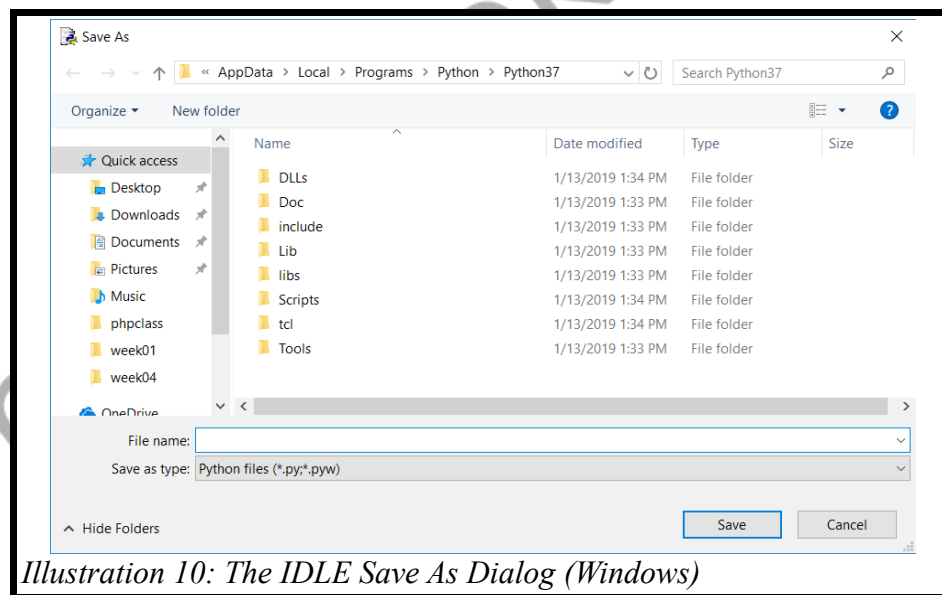
IDLE, by default, will ask you if you want to save the changes you have made by displaying the "Save before Run" dialog. Make sure that you want to overwrite the previous version of your program, before

you click "OK".



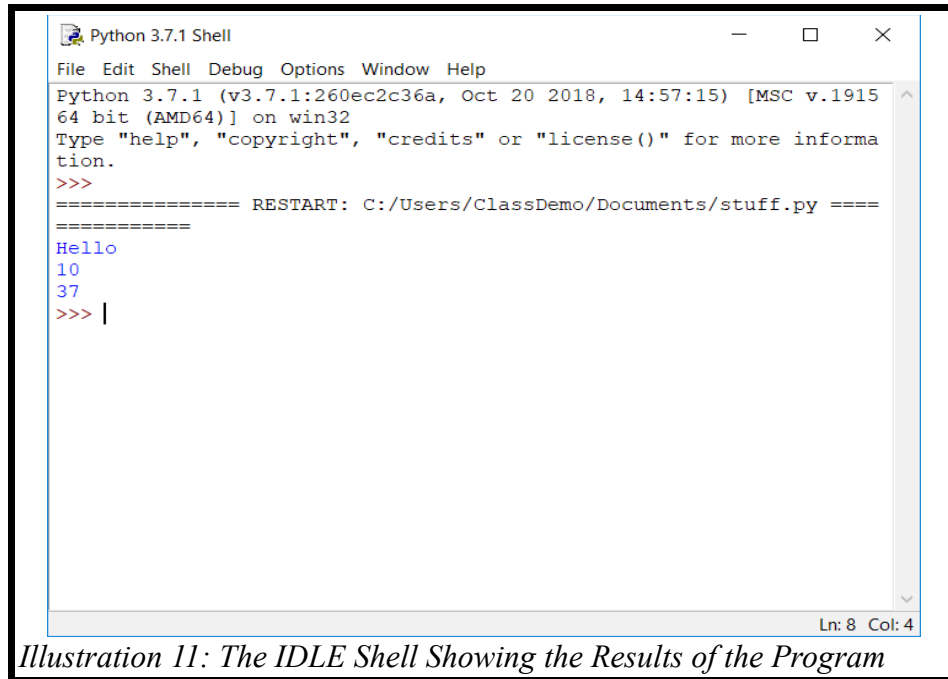
*Illustration 9: IDLE Editor Save before Run Reminder*

If the program is new and has not been saved, a save-as dialog will appear asking you were you want the program saved and to give the program a new name. Typically, programmers do not save their programs in the Python install folder.



*Illustration 10: The IDLE Save As Dialog (Windows)*

Once the program is saved, it is executed. The results of any output or errors fill be displayed on the Shell window for you to review.



*Illustration 11: The IDLE Shell Showing the Results of the Program*

## Summary

Here

## Important Terms

Here

## Exercises

## Word Search

## References

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