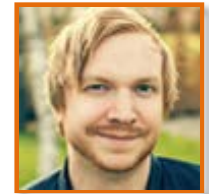


Game Programming with Python & PyGame

What is PyGame?

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Introduction

- **What is the goal of the course?**
 - How to write object-oriented Python code
 - How to get use to Python programming coming from other languages
 - How to use Python for 2D game development
 - Write a playable 2D game

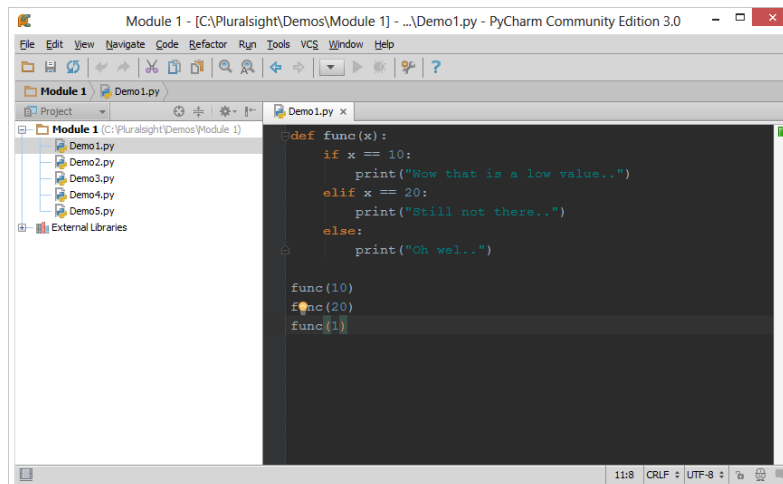
What is PyGame?

- **What is PyGame?**
 - A library that helps us create games using Python
 - Uses SDL (Simple DirectMedia Layer)
- **Why will we use PyGame?**
 - Portable – Runs on almost every platform!
 - Easy to use
 - Free



The Environment

- Download & Install Python (32 bit version)
 - <http://www.python.org/download/>
- Download & Install PyGame
 - <https://bitbucket.org/pygame/pygame/downloads>
- Choosing your IDE
 - Visual Studio + PTVS (Python Tools for Visual Studio)
 - <http://pytools.codeplex.com/>
 - PyCharm from JetBrains
 - <http://www.jetbrains.com/pycharm/download/>

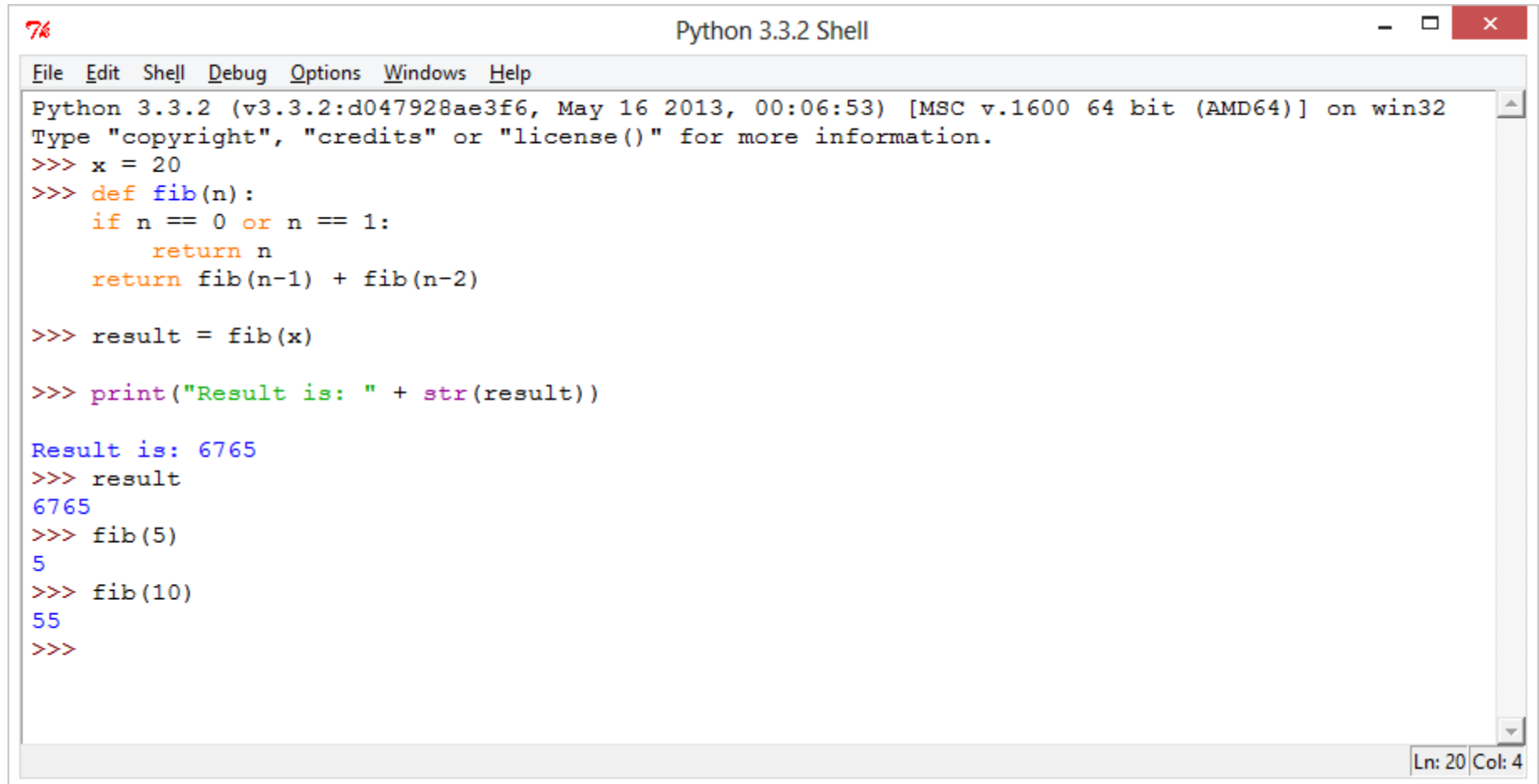


Python crash course

- Code is executed through an interpreter
- Can be both dynamically and strongly typed
- Code can be compiled to bytecode
- No curly braces
 - Uses tabs & spaces



Understanding the syntax



The image shows a screenshot of a Python 3.3.2 Shell window. The window has a title bar with the text "Python 3.3.2 Shell" and standard window controls (minimize, maximize, close). Below the title bar is a menu bar with the following options: File, Edit, Shell, Debug, Options, Windows, and Help. The main area of the window contains a Python script. The script starts with a version and build information string, followed by a prompt to type "copyright", "credits", or "license()". The script then defines a function `fib(n)` that calculates the nth Fibonacci number. It uses a base case for `n == 0` or `n == 1` and a recursive case for `n > 1`. The script then calls `fib(20)` and stores the result in `result`. Finally, it prints the result using `print("Result is: " + str(result))`. The output of the script is displayed in the same window, showing the result of the function call.

```
Python 3.3.2 (v3.3.2:d047928ae3f6, May 16 2013, 00:06:53) [MSC v.1600 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> x = 20
>>> def fib(n):
    if n == 0 or n == 1:
        return n
    return fib(n-1) + fib(n-2)

>>> result = fib(x)

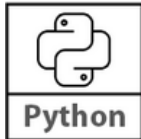
>>> print("Result is: " + str(result))

Result is: 6765
>>> result
6765
>>> fib(5)
5
>>> fib(10)
55
>>>
```

Ln: 20 Col: 4

Summary

- Installing Python and PyGame
- Getting to know the IDE
- Crash course in Python programming for programmers
- Want more fundamental understanding of Python?



Python Fundamentals

Python Fundamentals gets you started with Python, a dynamic language popular for web development, big data, science and scripting.

Authored by: [Bingham](#), [Smallshire](#)

Duration: 5h 1m

Level: Intermediate

Released: 8/21/2013

Course Rating: ★★★★★