MVA Microsoft Virtual Academy

Introduction to Programming using Python

Microsoft

Susan Ibach | Technical Evangelist
Christopher Harrison | Content Developer

Meet Susan Ibach| @hockeygeekgirl

Technical Evangelist

- Helping developers understand Visual Studio, app building
- Microsoft Certified Trainer
- My first program was written in basic on a computer with 64K of memory

Will not admit how many years coding experience

- Basic, Fortran, COBOL, VB, C#, HTML, Python
- Frequent blogger and presenter
- marathoner, wife, and mother of two awesome boys!

Meet Christopher Harrison | @geektrainer

Content Developer

- Focused on ASP.NET and Office 365 development
- Microsoft Certified Trainer
- Still misses his Commodore 64

Long time geek

- Regular presenter at TechEd
- Periodic blogger
- Certification advocate
- Marathoner, husband, father of one four legged child

Course Topics

Introduction to Programming using Python - Day One	
01 | Getting started	05 | Working with dates and times
02 | Displaying text	06 | Making decisions with code
03 | String variables	07 | Complex decisions with code
04 | Storing numbers	

Course Topics

Introduction to Programming using Python - Day Two	
08 | Repeating events	12 | Reading from files
09 | Repeating events until done	13 | Functions
10 | Remembering lists	14 | Handling errors
11 | How to save information in files	

Setting Expectations

- Target Audience
  - People new to programming
  - Students
  - Career changers
  - IT Pros
  - Anyone with an interest in learning to code
- If you want to follow along…
  - Install Visual Studio Express
  - Install the Python tools
    - Instructions coming soon…

Join the MVA Community!

- Microsoft Virtual Academy
  - Free online learning tailored for IT Pros and Developers
  - Over 2M registered users
  - Up-to-date, relevant training on variety of Microsoft products
- "Earn while you learn!"
  - Get 50 MVA Points for this event!
  - Visit http://aka.ms/MVA-Voucher
  - Enter this code: IntProgPython (expires 27 Oct 14)

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Getting started

Why and How

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Susan Ibach | Technical Evangelist
Christopher Harrison | Content Developer

Why learn to code?

- Programming is a powerful tool you can use to solve all kinds of problems
- What do you want to do?
  - Build a phone app to help you find directions
  - Calculate how much money you need to buy a car
  - See what people are saying about your business on social media
  - Program a wearable device so it tweets you when you should re-apply sunscreen

Why Python?

- There are a LOT of different programming languages out there
- Python is one of the easier ones to learn
- There are lots of free tools out there you can use to code or learn Python
- There are a lot of different ways to use Python code

And as a bonus

- Once you learn how to code in one programming language it will be easier to learn another programming language, and another, and another…

JavaScript

???

C#

C++

Perl

Does anyone really use Python?

- Industrial Light and Magic uses Python to help with image processing and lighting special effects
- ForecastWatch.com uses Python to help with weather forecasts
- DevNet uses Python to aggregate news feeds
- A student in the England made a desktop dinosaur roar every time it was mentioned on twitter with Python and Raspberry Pi

But let's be clear about something…

- You won't learn enough in this course to start adding special effects to the next big superhero movie
- You WILL learn enough to start solving real world problems with code
- OR to just start having some fun ☺

So how do I get started?

You need to install software on your PC/laptop

- There are a lot of different tools out there you can use to write Python Code.
- In this course we will use Visual Studio + Python Tools for Visual Studio

python powered Python Tools for Visual Studio

The installation steps are explained at the Python Tools for Visual Studio website

1. Install Visual Studio 2013 for desktop (free)
2. Install Visual Studio 2013 Update 3 so you have the latest features
3. Install Python Tools for Visual Studio
4. Install the Python 3.4 interpreter

Geek Tip!

- There are actually a lot of different flavors of Python:
- IronPython, IPython, CPython, PyPy, Jython, Canopy, Anaconda, …
- We will be using the CPython interpreter with Python 3.4
- So, if you copy code from a website and it doesn't work don't panic! It might just be a slightly different version of Python

How do I know I installed everything correctly?

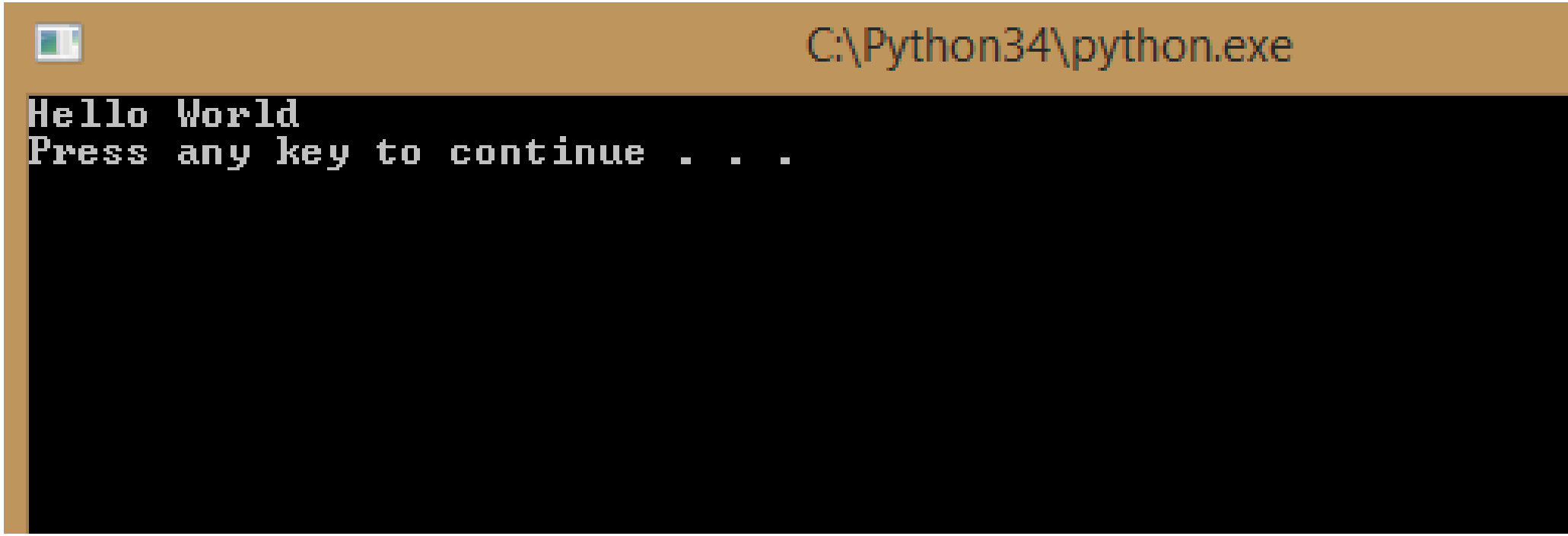
- There is a tradition among programmers
- We always test our installation by writing the same program:

DEMO

Creating your Hello World program!

You have now created your first application

```
print('Hello World')
```



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Best practices

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Pick up good habits right away!

- Comments in your code help you or someone else understand
  - What your program does
  - What a particular line or section of code does
  - Why you chose to do something a particular way
  - Anything that might be helpful to know if I am looking at the code later and trying to understand it!

In Python we use a # to indicate comments

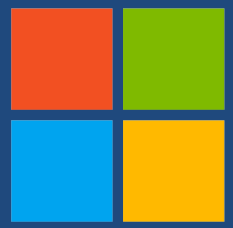
```
#My first Python Application
#Created by me!
#Print command displays a message on th
print('Hello World')
```

Did you notice the colors?

Visual Studio uses color coding to make your code easier to read

- You can change the colors if you want
- Go to Quick Launch, type Colors, select **Options | Environment | Fonts and Colors**
- Change it to whatever you want

Congratulations you are now a coder



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