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The Corndel DevOps Engineering Programme

Module 0 – An Introduction to Python

Agenda

1000 Welcome and introductions

Quick reminder of how workshops will run

Part 1: Understanding basic Python

- Recap (20 min)
- Exercise (1 hour 10 min)

1230 **Lunch Break (1 hour)**

1330 **Part 2: Dynamite**

- Recap (10 min)
- Exercise (as long as you like)

How the Workshops Will Run

- Will typically involve a recap of relevant course material & questions to confirm your understanding
- Some new concepts required for the exercises will be introduced
- Exercises will typically be carried out in pairs/groups
- Workshop format may change slightly over time and depending on the module

Objectives of this Workshop

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- Reinforce understanding of Python fundamentals
    - Or look at more advanced features
- Check how people are finding the material so far
- Hands on experience building something a little bigger

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Part 1: Python (Mentimeter Slides)

Part 1: Python Basics

Requirements

- Python: chapter 1 of the exercise includes installing Python
- Visual Studio Code: https://code.visualstudio.com/
- A terminal. You can use whatever your computer comes with but on Windows, you may want to use Git for Windows
    - Its main purpose is a tool called Git (more on that later)
    - Provides a bash-like terminal for Windows

Part 1: Python Basics

Exercises

- To get to grips with the essentials of Python, work through the various chapters of this site: https://python-intro.devops.corndel.com/
    - The first five chapters should set you up nice to complete Module 1 of the course
    - Everyone will pick up Python at their own pace. You can learn gradually over the coming months
- If you'd like something a little different: https://www.codewars.com/
    - Code Kata are small practice drills (inspired by karate)
    - Try some exercises at whatever level stretches your ability

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Lunch

Back at 13:30

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Part 2: Dynamite

Plan for the Afternoon

- Continue working through the “Intro to Python” material. If you reach the end of chapter 3 (types) you can try the “shopping cart” exercise
- We will introduce “Dynamite”, a more complex exercise that requires understanding the concepts up to chapter 5 (control flow).
- We will also quickly recap “imports” (covered in more depth in chapter 6) but you can attempt Dynamite without detailed understanding

Imports

Importing Python modules

- Makes Python code from other files available in the current file. Usually this is done at the top of the file.
- Here is how to import the random module, which is built-in but needs to be imported before you can use it.

```
import random
```

- You can now use it. Today you might want the following functions:

```
random.choice(my_list)
random.random()
```

Dynamite

The rules

- Two player game, taking place across many rounds
    - First to 1000 points wins the match
- Each round, choose Rock/Paper/Scissors/Water/Dynamite (R/P/S/W/D)
- Normal rules of rock paper scissors: R > S > P > R
- Dynamite beats the usual three, and water only beats dynamite
    - D > RPS > W > D
- When both players make the same move, it’s a tie and the point for the round carries over to the next one
- 100 uses of dynamite per match

Dynamite

The exercise

- Download this code:
  - https://github.com/CorndelAdmin/Dynamite-Python
- Write a bot that can play Dynamite
  - See the README.md for a summary of the rules, how to write a bot and run the game.
- Write a bot that wins
  - We could have a little friendly competition at the end

Thank You!

Please complete the feedback survey by clicking here