INTRODUCING…

PYTHON

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HELLO

- Learning Objectives:
    1. Understand the background and the process of working with Python
    2. Demonstrate the ability to work with Python in a terminal environment

WHAT IS PYTHON?

- Python is a high level, interpreted, interactive and object-oriented scripting language
- The language has been designed to be readable and uses English keywords frequently
  - Other programming languages rely upon the usage of punctuation

INTERPRETED, INTERACTIVE AND OBJECT-ORIENTED?

- **Interpreted** means that the language is processed at runtime by the interpreter and therefore you are not required to compile the program before execution
- **Interactive** means that you can interact with the Python interpreter directly in order to write your programs
- **Object-Oriented** means that Python supports the object-oriented style of programming; whereby the code is encapsulated within objects

HISTORY OF PYTHON

- Python was first developed by Guido van Rossum in the late 1980's and early 1990's
- The language is derived from other languages such as: C++, Unix shell etc.

FEATURES OF PYTHON

- The language is **easy to learn**
- There is a **broad standard library**
- Students can **interact** with the language
- The language is **portable** and **extendable**
- Supports **databases** and **graphical user interfaces**

ADVANTAGES OF PYTHON

- Python can be used for a wide variety of tasks, such as:
  - Web Development
  - Embedded Applications
  - Gaming
  - Data Processing and Visualisation
- A large collection of libraries and resources
- Improves a developers productivity
- Support for machine learning and artificial intelligence

USING PYTHON

- Python 3 is the language of choice for this module
  - the simple nature of Python makes it a great programming language for beginners
  - it is cross-platform and works across all major operating systems
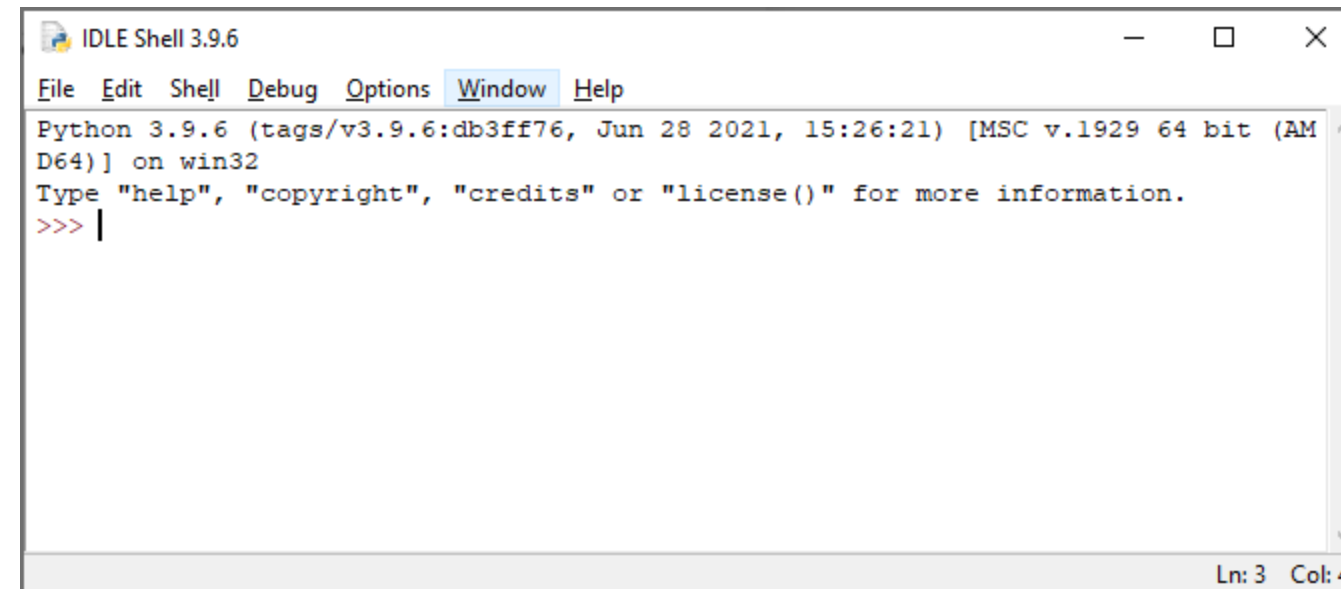
MACOS AND LINUX

- Typing `python3` into the terminal window will call the Python interpreter

WINDOWS

- Typing `py` or `python3` into the command-line or PowerShell will call the Python interpreter
  - only a single command will work
  - depends upon how you installed Python on your machine

PYTHON IDLE

- The integrated development and learning environment for Python
- Available on macOS, Linux and Windows and installed alongside the Python interpreter
- A multi-window text editor which has colour-coded input, output and error messages
- Provides features to debug your code with persistent breakpoints, stepping and the ability to view global and local namespaces

GOODBYE

- Questions?
  - Post them in the **Community Page** on Aula
- Contact Details:
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