

# Data Structures & Functions

I will firstly **show** the **four different data structures** built-in in Python. After having shown the data structures and how they operate, I will explain the **main differences** between the data structures and their individual strengths. After this I am going to show how **functions** work, and how to make use of **inner functions** to make **versatile** code. Then I'll show how we can implement the built in function **.sorted()** in our code, and it's customizability. Lastly I wanna show **list comprehensions** and how they work, both with conditions and without conditions

# Pythonic OOP

In my presentation I will show the creation of a **small program via OOP**. This program will consist of; **creation of classes**, **class variables**, **functions**, **instantiation** and finally **inheritance**. I will talk about **OOPs strengths** and when to use it, then **compare** Pythonic OOP to Java OOP. After talking about OOP I'll show how to make use of **encapsulation** via **private attributes**. I will then implement a **@property** decorator and give general knowledge about **decorators**

# Generators, Decorators & Context Managers

Firstly I will give some general knowledge about **generators** in python, then show a **class iterable**. I wanna show how this makes our snippet of code runnable through a for loop via the **iterator**. Then I wanna show how we can convert our iterable slightly to make use of **.next()**. I will then give examples of a **generator expression**, and **decorators**; here **@decorator** and **@property**. During the showcase of decorators, I'll also showcase **functions** and **inner functions**. I will then show a use case for **context managers**

# Python Modules & the Python Development Environment

Here I will show off how we can implement code other people have written for us, by **importing modules** and using these modules in our code. I will go through the **web scraper** we did. I will explain the **advantages** of using modules within python, and where to find them. Within the scope of this project, I will also show off how you can **dockerise** your project. I will showcase how these can be used within a team of developers for independent and ease of use.