OBJECT ORIENTED PROGRAMMING

INTRODUCTION

Object-oriented Programming (OOP) is a programming paradigm which provides a means of structuring programs so that properties and behaviours are bundled into individual objects. Another common programming paradigm is **procedural programming** which structures a program like a recipe in that it provides a set of steps, in the form of functions and code blocks, which flow sequentially in order to complete a task.

The key takeaway is that objects are at the centre of the object-oriented programming paradigm, not only representing the data, as in procedural programming, but in the overall structure of the program as well.

Simula was the first object-oriented programming language. Java, Python, C++, Visual Basic and Ruby are the most popular OOP language today.

NOTE: Since Python is a multi-paradigm programming language, you can choose the paradigm that best suits the problem at hand, mix different paradigms in one program, and/or switch from one paradigm to another as your program evolves.

In python, OOP concepts are implemented through the use of classes.

OBJECTS AND CLASSES

A class is group of objects with same attributes and common behaviours. Classes are used to create new user-defined data structures that contain arbitrary information about something. It's important to note that a class just provides structure—it's a blueprint for how something should be defined, but it doesn't actually provide any real content itself.

How to define a Class?

```python
class Dog:
    pass
```

This is the simplest way in which you can create a class. (This topic will be covered in detail in the next post.)