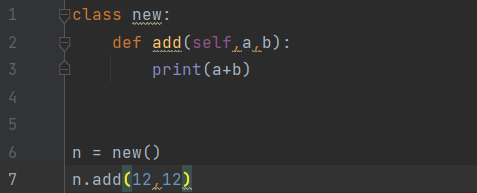
**OOPS:**

**Class and Object:**

Class is a blueprint for objects. Objects are instances of classes. Classes define attributes and behaviours.

****

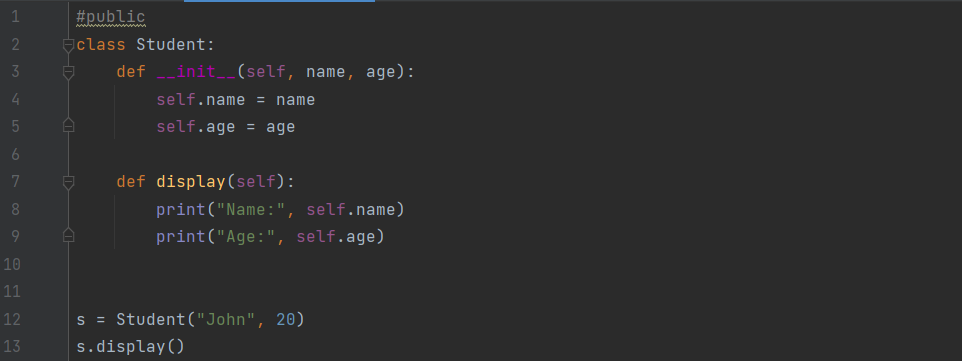
**Output:**

****

**Access Specifiers:**

Python uses naming conventions for access control.

**PUBLIC:**   
No strict public specifier in Python. By convention, attributes without underscore are considered public. Encourages transparency and collaboration.

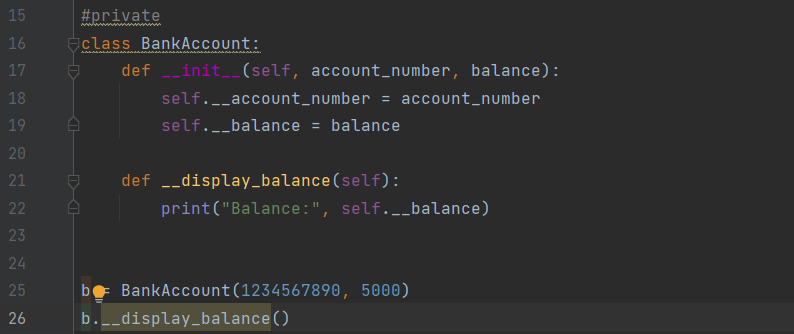
****

**Output:**

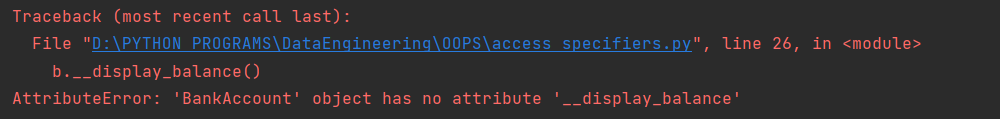
****

**PRIVATE:**

Attributes prefixed with double underscores (‘\_\_’) are considered private. Access restricted to the defining class. Encourages encapsulation and data hiding.

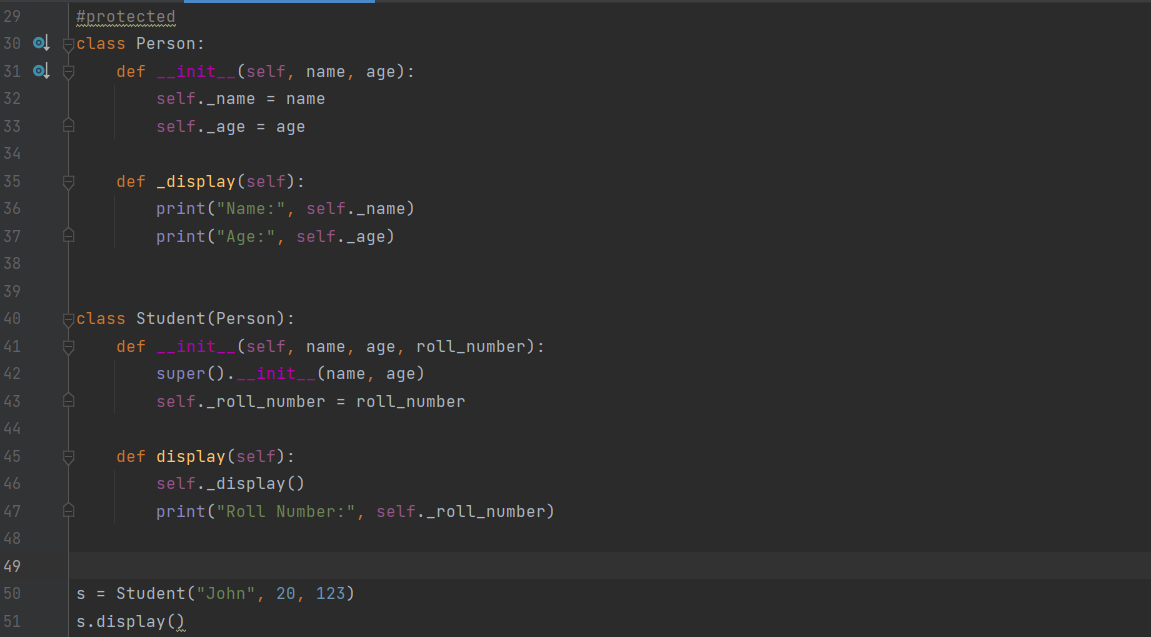
****

**Output:**

****

**PROTECTED:**

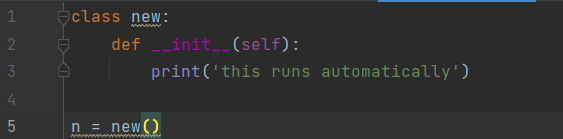
Attributes prefixed with a single underscore (‘\_’) are considered protected. Conveys a hint that the attribute is for internal use.

****

**Output:**

****

**Constructor:**  
Special method \_\_init\_\_ in classes. Initializes object attributes. Automatically called when an object is created.

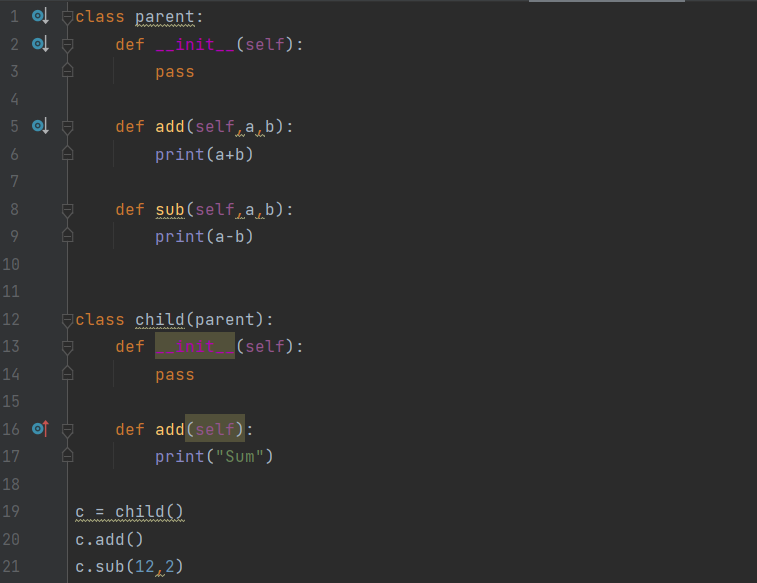
****

**Output:**

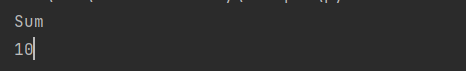
****

**Inheritance:**

Mechanism where a class inherits properties and methods from another. Encourages code reuse.

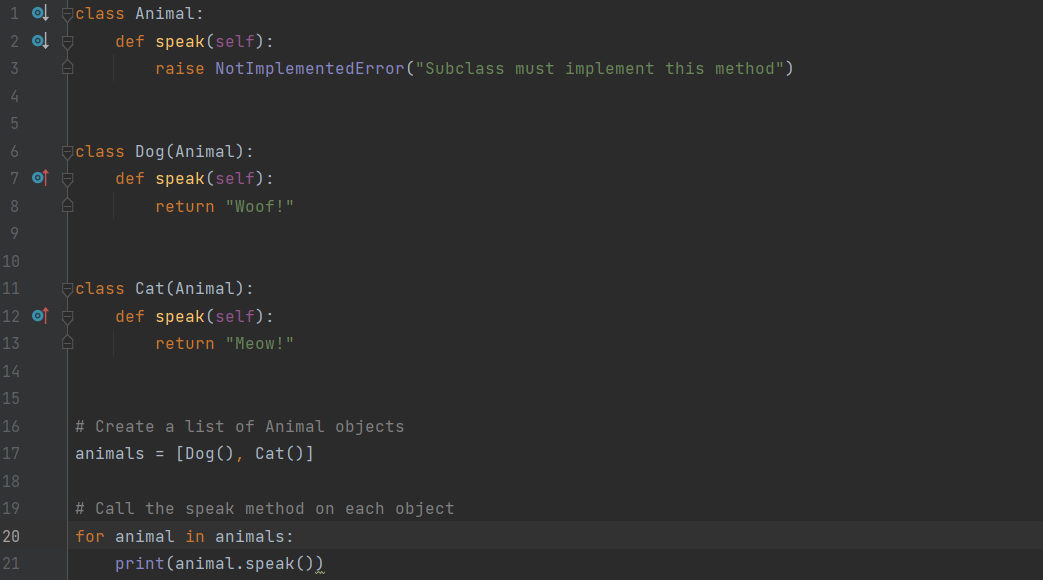
****

**Output:**

****

**Polymorphism:**

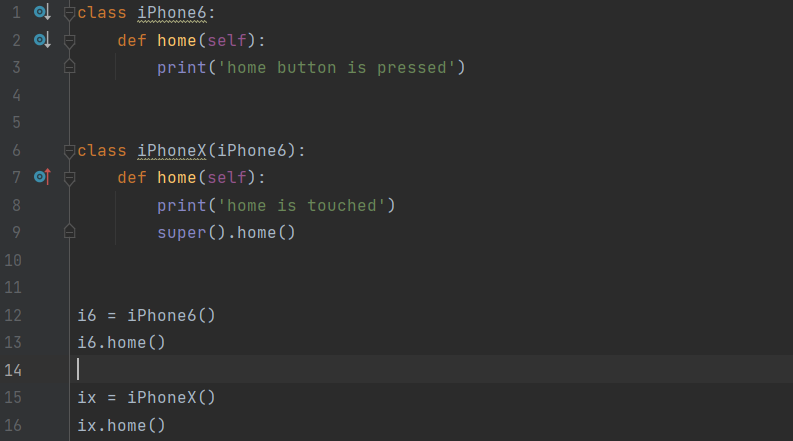
Ability to use a single interface for different types. Objects of different classes can be used interchangeably. Enhances flexibility.

****

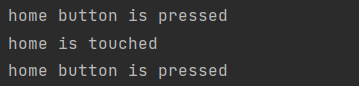
**Output:**

****

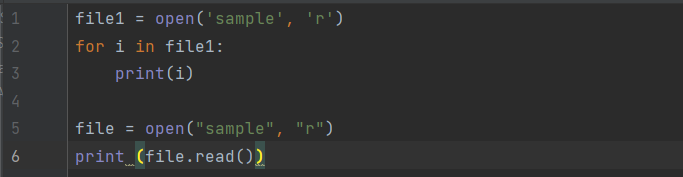
**Method Overriding:**  
Inheritance feature. Child class redefines a method of its parent class. Provides a specific implementation in the child class.

****

**Output:**

****

**File Handling:**  
Reading/writing files. Open, read, write, close. Modes: read ('r'), write ('w'), append ('a').

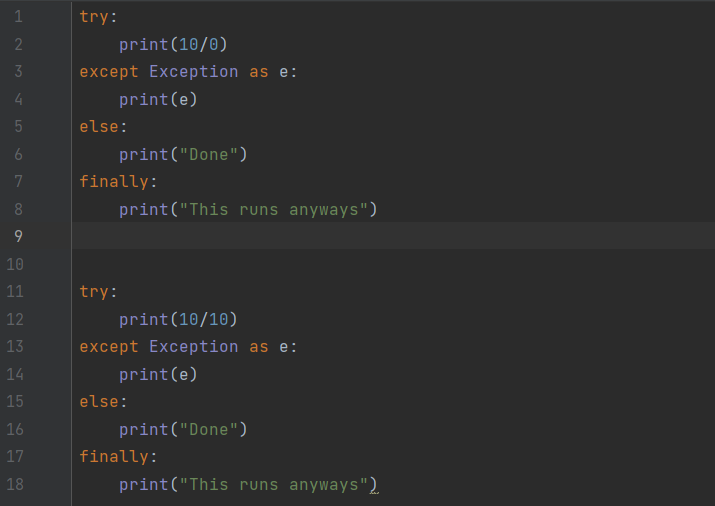
****

**Output:**

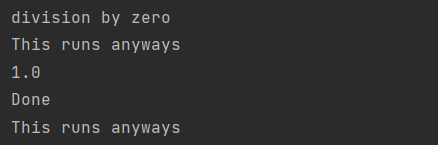
****

**Exception handling:**

Handling errors during program execution. Try block contains code. Except block catches exceptions. Finally block executes regardless.

****

**Output:**

****