**Inheritance**

Inheritance is a fundamental concept in [object-oriented programming](https://www.geeksforgeeks.org/python-oops-concepts/)(OOP) that allows a class (called a child or derived class) to inherit attributes and methods from another class (called a parent or base class). This promotes code reuse, modularity, and a hierarchical class structure.

**Basic Example of Inheritance**

Inheritance allows us to define a class that inherits all the methods and properties from another class.

*# Parent class*

**class** **Animal**:

**def** \_\_init\_\_(self, name):

self.name = name *# Initialize the name attribute*

**def** speak(self):

**pass** *# Placeholder method to be overridden by child classes*

*# Child class inheriting from Animal*

**class** **Dog**(Animal):

**def** speak(self):

**return** f"**{**self.name**}** barks!" *# Override the speak method*

*# Creating an instance of Dog*

dog = Dog("Buddy")

print(dog.speak()) *# Output: Buddy says Woof!*

**Output**

Buddy barks!

**Explanation:**

* Animal is the parent class with an \_\_init\_\_ method and a speak method.
* Dog is the child class that inherits from Animal.
* The speak method is overridden in the Dog class to provide specific behavior.