Inheritance in Python

What is Inheritance?

- **Inheritance** allows one class (child class) to use the properties and methods of another class (parent class).
- It promotes **code reusability** and **organization**.
- Child class can also add its own attributes/methods.

Syntax:

```
class Parent:
    # parent attributes and methods
class Child(Parent):
    # child attributes and methods
```

- **Overriding Methods**

Types of Inheritance:

1. **Single Inheritance** – One child class inherits from one parent.
2. **Multiple Inheritance** – One child inherits from multiple parents.
3. **Multilevel Inheritance** – Child → Parent → Grandparent chain.
4. **Hierarchical Inheritance** – One parent with multiple children.
5. **Hybrid Inheritance** – Combination of above.

Key Points:

- Inheritance saves time and reduces repetition.
- Child class can use parent class attributes & methods.
- Child can **override** parent methods.
- super() is used to call parent class constructor/methods.