**Exercise 1:**

Create a class **Animal** with a method **makeSound()**. Then, create two subclasses **Dog** and **Cat** that override the **makeSound()** method to bark and meow, respectively.

**Exercise 2:**

Create a class **Vehicle** with methods **startEngine()** and **stopEngine().** Then, create two subclasses Car and Motorcycle that extend the Vehicle class and implement these methods.

**Exercise 3:**

Create a class **Person** with a method **displayInfo**(). Then, create two subclasses Student and Teacher that extend the Person class and implement the **displayInfo**() method to show student and teacher information.

**Exercise 4:**

Create a class **BankAccount** with field **balance** and methods **deposit(double amount)** and **withdraw(double amount)**. Then, create two subclasses **SavingsAccount** and **CheckingAccount** that extend the **BankAccount** class and implement interest calculation for savings accounts and overdraft protection for checking accounts.

**Exercise 5:**

Create a class hierarchy for geometric shapes. Start with a base class **Shape** and create subclasses **Circle**, **Rectangle**, and **Triangle**. Implement methods to calculate area and perimeter for each shape.

**Exercise 6:**

Create a class hierarchy for employees in a company. Start with a base class **Employee** and create subclasses **Manager**, **Developer**, and **Intern**. Each subclass should have specific attributes such as salary, role, and additional methods related to their roles.

**Exercise 7:**

Create a class hierarchy for a simple zoo simulation. Start with a base class **Animal** and create subclasses **Mammal**, **Bird**, and **Fish**. Each subclass should have specific attributes and methods, and you can add more specific animal classes as needed.

**Exercise 8:**

Create a class hierarchy for a university system. Start with a base class **Person** and create subclasses **Student** and **Professor**. Add more fields and methods to capture additional information.

**Exercise 9:**

Create a class hierarchy for a multimedia library. Start with a base class **MediaItem** and create subclasses **Book**, **Movie**, and **MusicAlbum**. Add more fields and methods to represent details specific to each type of media.

**Exercise 10:**

Create a class hierarchy for a retail store system. Start with a base class **Product** and create subclasses **Electronics**, **Clothing**, and **Food**. Each subclass should have 7 to 10 fields representing different product attributes.

**Exercise 11:**

Create a class hierarchy for a transportation system. Start with a base class **Vehicle** and create subclasses **Car**, **Bus**, and **Bicycle**. Each subclass should have 7 to 10 fields representing different vehicle attributes.