

- 1.** Write a Python program to create a class called "Person" with properties for name, age and country. Include a method to display the person's details. Create two instances of the 'Person' class and display their details.
- 2.** Write a Python program to create a class called 'Rectangle' with properties for width and height. Include two methods to calculate rectangle area and perimeter. Create an instance of the 'Rectangle' class and calculate its area and perimeter.
- 3.** Write a Python program that creates a class called 'Vehicle' with properties for make, model, and year. Include a method to display vehicle details. Create a subclass called 'Car' that inherits from the 'Vehicle' class and includes an additional property for the number of doors. Override the display method to include the number of doors.
- 4.** Write a Python program that creates a class called "BankAccount" with properties for account number and balance. Include methods to deposit and withdraw money from the account. Create some instances of the "BankAccount" class, deposit some money, and withdraw a portion of it.
- 5.** Write a Python program that creates a class called 'Shape' with a method to calculate the area. Create two subclasses, 'Circle' and 'Triangle', that inherit from the 'Shape' class and override the area calculation method. Create an instance of the 'Circle' class and calculate its area. Similarly, do the same for the 'Triangle' class.
- 6.** Write a Python program that creates a class called 'Employee' with properties for name and salary. Include a method to calculate annual salary. Create a subclass called 'Manager' that inherits from the 'Employee' class and adds an additional property for department. Override the annual salary calculation method to include bonuses for managers. Create two instances of the 'Manager' class and calculate their annual salary.
- 7.** Write a Python program that creates a class `Book` with properties for title, author, and publication year. Include a method to display book details. Create a subclass called 'Ebook' that inherits from the 'Book' class and includes an additional property for book price. Override the display method to include the book price. Create an instance of the 'Ebook' class and display its details.

8. Write a Python program that creates a class called 'Animal' with properties for species and sound. Include a method to make the animal's sound. Create a subclass called 'Dog' that inherits from the 'Animal' class and adds an additional property for color. Override the make sound method to include the dog's color. Create an instance of the 'Dog' class and make it make its sound.

9. Write a Python program that creates a class called Bank with properties for bank names and branches. Include methods to add a branch, remove a branch, and display all branches. Create an instance of the Bank class and perform operations to add and remove branches.

10. Write a Python program that creates a class called Product with properties for product ID, name, and price. Include a method to calculate the total price by multiplying the price by the quantity. Create a subclass called PersonalCareProduct that inherits from the Product class and adds an additional property for the warranty period. Override the total price calculation method to include the warranty period. Create an instance of the PersonalCareProduct class and calculate its total price.

11. Write a Python program that creates a class called BankAccount with properties for account number, account holder name, and balance. Include methods to deposit, withdraw, and transfer money between accounts. Create multiple instances of the BankAccount class and perform operations such as depositing, withdrawing, and transferring money.

12. Write a Python program that creates a class called University with properties for university name and departments. Include methods to add a department, remove a department, and display all departments. Create an instance of the University class and add and remove departments.