

**Problem 1:**

Create a class Person with a constructor and a destructor. The constructor should print "Person created", and the destructor should print "Person destroyed". Instantiate the object inside a block of code, so the destructor gets called when the object goes out of scope.

**Problem 2:**

Create a base class Shape that has a method draw(). Create a derived class Circle that overrides the draw() method. Instantiate objects of both classes and call their draw() methods.

**Problem 3:**

Create a class Animal with a method sound(). Derive a class Mammal from Animal, and then derive a class Dog from Mammal. Override the sound() method in each derived class. Create an object of each class and call sound().

**Problem 4:**

Create two classes ClassA and ClassB. Write a friend function add() that can access private data members from both classes and return their sum.

**Problem 5:**

Create a base class Vehicle with a destructor that prints "Vehicle destroyed". Derive a class Car from Vehicle and create a destructor for it that prints "Car destroyed". Observe the order in which destructors are called when an object of the Car class is deleted.