OOP Lab Task 09

1. Design a program that includes a base class named Animal, and two derived classes, Bird and Reptile, that are privately inherited from the Animal class. The Animal class has two public data members, the name and age of an animal, and a method speak(), leave that empty here. The Bird class has an additional private data member named wingLength, representing the length of the bird's wings. The Reptile class has an additional private data member named habitat, representing the environment where the reptile lives.

   The sub classes will override the speak() method, which displays the name and age, and the specific data members of each class along with a message indicating the type of the animal and the sound it makes. The Bird class has a specific message indicating that the bird can sing, while the Reptile class has a specific message indicating that the reptile can creep.

   The main function of the program should create an object of the Bird class and an object of the Reptile class, initialize their data members using the constructor, and call their speak() member function to display the information.

   Note: None of your class should have getter and setter methods

   Sample Output:

   ```
   My name is: Parrot My age is: 2 My wing length is: 10
   I am a bird and I can sing...
   My name is: Crocodile My age is: 5 My habitat is: Land and water
   I am a reptile. I can creep...

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2. You have been asked to design a program that simulates the behavior of a Skimmer, which is a type of boat that is capable of both swimming and flying. To accomplish this, you will create a Skimmer class that is derived from two base classes, Boat and Plane using protected inheritence.

The Boat class will contain data member called boatLength, which represents the length of the boat, and a member function called swim(), which prints the message "I am swimming"

The Plane class will contain a data member called maxAltitude, which represents the maximum altitude the plane can reach, and a member function called fly(), which prints the message "I am flying".

The Skimmer class will contain two private data members called name, and numPassengers, which represents the number of passengers the skimmer can carry, and a public member function called swimAndFly(), which will class the swim() and fly() method of the super classes.

In the main function, create an object of the Skimmer and initialize through constructor.

Display the properties of the Skimmer object using the display() member function. Finally, call the swimAndFly() function to simulate the behavior of the Skimmer.

Note: None of your class should have getter and setter methods, only initialize the object through a constructor.

Sample Output:

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Skimmer Name: Swim and Fly  Length: 40ft, Max Altitude: 13000ft, Passengers: 2
I am swimming
I am flying

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