Questions -6

1. Create a base class polygons and two subclasses triangle and rectangle

The display functions for area and perimeter can be inherited from the base class.

The calculations of area and perimeter for each class can be done in the derived class .

Write a program to create such a system. Don’t use constructors

**For the problems below, constructors are to be used.**

1. Create an employee class with the employees id being a protected data in the base class.

It can be entered from the keyboard using a constructor .The base class should have functions for calculating the annual salary of an empl;oyees.

1. Design **a multilevel inheritance** system

Student with roll number and marks of tests -base class

Student’s marks in total and CGPA calculation -derived class

Student’s result in a chart form to be displayed -derived from the previous class

Note: use your intuition to add more features to the above program

1. Find a suitable program which implements multiple inheritance
2. A bank maintains two kinds of accounts –savings and current

The saving account uses compound interest calculations and allows withdrawal but no cheque book facility.

The current accounts gives cheque book facility but no interest. Current account holders should maintain a minimum balance and if it is not maintained, a penalty of a service charge is imposed.

**The Problem**:

Create a class ACCOUNT that stores customer name, account number and type of account . From this ,derive the classes CUR-ACCOUNT and SAV-ACCOUNT to make them more specific to their requirements . Include sufficient member functions to make them specific to their requirements .The tasks are:

1. Accept deposit from a customer and update the balance
2. Display the balance
3. Compute the interest.
4. Permit withdrawal and update the balance
5. Check for minimum balance ,impose penalty, and update the balance
6. Add necessary messages for display

6.**Multiple Inheritance**

* A company which makes both s/w and h/w .It is to inherit from two base classes.
* One base class which stores the names of the items and their prices
* Another base class which has the sales quantities of the items ( at least three)
* Have two derived classes –one for hardware items
* The second derived class is for software items .

The main program should finally calculate the sales , total amount in sales and display various messages. Use your imagination to add more features to the program.