

Lab 13 Inheritance

Problem 1:

Create a class named 'Member' having the following members:

Data members

1 - Name

2 - Age

3 - Phone number

4 - Address

It also has a function named 'printSalary' which prints the salary of the members.

Two classes 'Employee' and 'Manager' inherits the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.

Problem 2:

All the banks operating in Pakistan are controlled by SBP. SBP has set a well-defined guideline (e.g. minimum interest rate, minimum balance allowed, maximum withdrawal limit etc.) which all banks must follow. For example, suppose SBP has set minimum interest rate applicable to a saving bank account to be 4% annually; however, banks are free to use 4% interest rate or to set any rates above it.

Write a program to implement bank functionality in the above scenario. Note: Create few classes namely Customer, Account, SBP (Base Class) and few derived classes (HBL, MCB, PNB etc). Assume and implement required member variables and functions in each class.

Prototype:

```
Class customer
{
//Personal Details ...
// Few functions ...
}
Class Account
{
// Account Detail ...
// Few functions ...
}
Class SBP
{
Customer c; //hasA relationship
Account a;   //hasA relationship
..
Public double GetInterestRate() { }
```

```
Public double GetWithdrawalLimit() {      }  
}  
Class HBL: public SBP  
{  
//Use SBP functionality or define own functionality.
```

```
}  
Class MCB: public SBP  
{  
//Use SBP functionality or define own functionality.  
  
}
```

Problem 3:

Write a program that defines a **shape** class with a constructor that gives value to width and height. Then define two sub-classes triangle and rectangle that calculate the area of the shape. Inside main, instantiate 2 classes i.e. a triangle and a rectangle class and then call the area() function for both.