Lab Assignment – 5

Q1. Design a class to represent a bank account which have the following members:

Data members

- Name of the depositor
- Account number
- Type of account
- Balance amount in the account

Member functions

- To assign initial values
- To deposit an amount
- To withdraw an amount after checking the balance
- To display name and balance

Code a main program to test the program.

Q2. Write the code for a class called Rectangle that has floating point data members such as length and width.

The class has the following **member functions:**

- void **setlength**(float) to set the length data member
- void **setwidth**(float) to set the width data member
- float **perimeter**() to calculate and return the perimeter of the rectangle
- float **area**() to calculate and return the area of the rectangle
- void **show**() to display the length and width of the rectangle
- int **sameArea**(Rectangle) that has one parameter of type Rectangle. **sameArea** returns 1 if the two Rectangles have the same area, and returns 0 if they don't.

  - 2.1. Write the definitions for each of the above member functions.
  - 2.2 Write main function to create two rectangle objects. Set the length and width of the first rectangle to 5 and 3.5. Set the length and width of the second rectangle to 5 and 12.9. Display each rectangle and its area and perimeter.
  - 2.3. Check whether the two Rectangles have the same area and print a message indicating the result. Set the length and width of the first rectangle to 15 and 6.3. Display each Rectangle and its area and perimeter again. Again, check whether the two Rectangles have the same area and print a message indicating the result

Q3. Write the definition for a class called Distance that has data member feet as integer and inches as float. The class has the following member functions:

- void **set**(int, float) to give value to object
- void **disp**() to display distance in feet and inches
- Distance **add**(Distance) to sum two distances & return distance

  - 3.1. Write the definitions for each of the above member functions.
  - 3.2. Write main function to create three Distance objects. Set the value in two objects and call add() to calculate sum and assign it in third object. Display all distances

Q4. Write a C++ Program to create **student** class, read and print 10 student's details. [Use Array of Objects]

Q5. Write a Program to design a class having static member function named **Show_CountObject()** which has the property of displaying the number of objects created of the class.