1. **Write a program contains a class Product that has data members: name (string), price (float), tax (float), serial (int), Pserial (static variable has initial value 10000). This class contains a constructor (Pserial decreased by 10), a function to read data members (except serial), a function to display data members (display the net price), and a function to display Pserial. In main function, define a several Product's objects, and apply all functions on them.**

2. **Write a program contains a class Series that has data members: x[20] (int), S[20] (double), n (number of elements). This class contains a function to return the value of $\binom{a}{b}$ for two given numbers a, b. It contains a function to set data members (each S_i is equal to $\sum_{j=0}^{i} \binom{i}{j} x_i^{j+1}$), a function to display data member in tabular form. This class contains a friend function that returns the sum of max and min elements in S for a given object, and a friend function compares between the sum values (sum of max element and min element of S) for two given objects and return the max object. In main function define two objects, and apply all functions on them.**

3. **Write a program contains two classes XD, YD. XD class has data members: X[10] (float) , n (number of elements), a function to test if a given number prime or not, a function to read data members, a function to return the average of all prime elements in X, a function to return the max prime element in X, and a function to display data members. YD class has data members: Y[10] (float), a (int), m**

(number of elements), a function to read data members, a function to return the average of all elements in Y which are divisible by a, a function to return the max element which are divisible by a in Y, and a function to display data members. These classes contains the following friend functions:

i. **Function to compares between two averages for two given objects of two classes, and display the max object.**
ii. **Function returns the sum of the max element (i.e., max prime element in X) for XD's object and the max element (i.e., max element in Y which are divisible by a) for YD's object.**

In main function define two objects of two classes, and apply all functions on them.

4. **Write a program contains a structure Data that has data members: name (string), salary (float), tax (float). This program contains a class Employee that has data members: E[10] (Data) , n (number of elements). This class has a function to read data members, a function to display data members, and a friend class NS. A class NS contains data members NSL[10] (float). This class contains a function to set the elements of NSL by a given (Employee) object, a function to return the sum of all net salaries for a given (Employee) object, and a function to compare between the net salaries for two given (Employee) objects and display the max object. In main function, define several objects of Employee class, one object and NS class, and apply all functions on them.**