Sheet#2

1. Implement a class Point for three-dimensional points (x,y,z). This class includes a function set() to read a point, function negate() to transform the point into its negative, and a function norm() to return the point's distance from the origin (0,0,0). Test this class in main function.

2. Implement a class Vector that has data member V (an array of float elements). This class includes a function read() to read V, a function sort () to sort the elements in V in ascending order, and a function Max () to retain the maximum element in V. Test this class in main function.

3. Implement a class Ratio contain two integer numbers n, and d. This class includes a function Rget() to read (n, d), a function convert() to convert a ratio number into decimal number, a function Rprint() to print the elements in ratio format, and function invert() to inverse $\frac{n}{d}$ into $\frac{d}{n}$. Test this class in main function.

4. Implement a class Student that contains ID, name, and marks of six subjects. The marks are stored in an array of float. The class contains the following member functions:

   i. Input() function to read data members.

   ii. Show() function to display data members.

   iii. Total() function to return the total of marks of a student.

   iv. Average() function to return the average marks of a student.

   Test this class in main function