1. Write the general definition of a class. Differentiate between private and public members of a class with a suitable example.

2. Describe different types of Constructors with examples in terms of object oriented programming.

3. Design a class named Circle. Construct three circle objects with radius 2.0, 12, and 24 and display the radius and area of each object. Copy the radius of the 2nd object into a new object using a user defined copy constructor. A getArea() function is used to return the area of a circle. Now implement the code using C++ mechanism.

4. A class named intake 99 has three private members named name, cgpa, and id. The name and id are of string type and cgpa is a double data type. A Member function set_val() is used to set the values and another member function show_val() is used to show the values of the student. Now create 15 students and display all the information for the 15 students using an array of objects.

5. Define a class named Box1 which has two private data members, one is area as double type another is color type string. Also define another class named Box2 which has the same private data members as Box1. A parameterized constructor is used to set the data members of the two classes. Now define a nonmember function named Compare_Box () which takes two objects as parameters [one object of Box1 and another object of Box2] and compares the area of the Box1 and Box2. Now implement the code using C++ mechanism.

6. Suppose there is a restaurant named KFC. So you have to choose your food item. You are asked to write a class KFC where the function Choosefood () takes the name of foods as the argument. The number of food items may vary from three (03) to five (05) and from person to person. Complete the task using function overloading concept.

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