**CS 103 Object Oriented Programing**

**Operator overloading ll lab 10**

**Q1:** Operator Overloading for String Class Your goal is to overload the operators for “String” class. You will need to write your code in the given String.h file (skeleton).Your implemented class must fully provide the deﬁnitions. Run your code against the testcase provided along String.h file (StringTestcase.cpp).

Given Files Name.

String.h

StringTestcases.cpp OR you can create your own main

**Q2:** Implementation of Bouquet of Flowers Your goal here is to write code in given skeleton.The skeleton has two classes. A Flower class. A “ﬂower” is characterized by following attributes:

- a name

- a color

- a basic price per unit

- an indication whether the ﬂower is perfumed or not

- and an indication to know whether the ﬂower is on sale.

* and with following behavior:

- a constructor initializing the attributes using parameters given in the order shown in the provided skeleton; a default constructor is not be necessary but the last two parameters have false as default value;

- a price method returning the ﬂower’s price : the price will be the base price if the ﬂower is not on sale; otherwise, the price will be half the base price;

- a bool parfume() method indicating whether the ﬂower is perfumed or not;

- an overloading of the == operator returning true if two ﬂowers are identical, false otherwise.

**Note :**Two ﬂowers are considered identical if they have the same name, the same color, and the two ﬂowers are both either perfumed or not (neither the price nor the fact that the ﬂower is on sale or not is involved in the comparison).

Next a **“Bouquet”** class which is modeled using a dynamic array of Flowers. The Bouquet class oﬀers the following methods :

- a method bool parfume() returning true if the bouquet is perfumed and false otherwise; a bouquet is perfumed if at least one of its ﬂowers is perfumed;

- a method price without parameters returning the price of the bouquet of ﬂowers; This is the sum of the prices of all its ﬂowers; this sum is multiplied by two if the bouquet is perfumed;

- an overload of the += operator which allows adding a ﬂower to the bouquet, the ﬂower will always be added at the end.

- an overload of the -= operator taking as a parameter a ﬂower and removing from the bouquet - all the ﬂowers identical to the latter (according to the deﬁnition of the == operator);

- an overloaded + operator which allows adding a ﬂower to the bouquet, the ﬂower will always be added at the end.

- an overloaded - operator taking as a parameter a ﬂower and removing from the bouquet

Given Files Name.

Flower.h

Bouquet.h

BouquetTestcases.cpp OR make your own Main