**Problem #1**

**String Operations**

In this problem you need to implement a class to represent a string as follows:

Private information:

* Keep a 1D array to store the string. Length of the array in each dimension should be 256 units.

Public information:

* Write an empty constructor that performs appropriate initialization.
* Write a constructor that takes a character pointer as input. The string pointed to by that pointer will be copied in the private member variable.
* Overload the comparison operators {>, >=, <, <=, ==, !=} to perform lexicographical comparison of strings.
* Overload the ‘+’ operator to perform concatenation.
* Overload the ‘\*’ operator such that a string x multiplied by an integer n produces a string where x is repeated n times successively. For example, “ababa” multipled by 3 would produce “ababaababaababa”

Write the class as described above so that the following code in the main function works perfectly with your class.

int main()

{

String s1("baby");

String s2("babies");

String s3 = s2;

String s4;

if (s1 > s2)

{

s1.Print();

}

else

{

s2.Print();

}

s4 = (s1 + s2) \* 5;

s4.Print();

(s1 + s2).Print();

s3 = (s1 + s2);

s3.Print();

return 0;

}

**The corresponding output should be like this**

baby

babybabiesbabybabiesbabybabiesbabybabiesbabybabies

babybabies

babybabies