OOP244 – Quiz #5

1. [1 mark] For the following class, add the definition for;
   * A member operator to overload += to take a char\* and return a reference to a String object.

class String{

char\* \_characters;

int \_size;

public:

String() : \_character(nullptr), \_size(0) {};

const char\* get(){return \_characters;}

};

1. [1 mark] Write the definition for the member operator you wrote in question #1 so that the function concatenates the characters from the passed in array onto the current array of characters and updates the size. Ensure there are no memory leaks.
   * [1 mark] It will first check that the character pointer passed in is not null. If it is not null, it will then check if the objects character pointer is not null. If the objects character pointer is null, allocate enough memory to hold the passed in array and store the pointer to that array to the objects character pointer. Copy the passed in array into the objects array. Update the \_size.
   * [1 mark] If the objects character array is not null, create a temporary pointer to a character array and allocate enough memory to hold the contents of both the current objects array and the passed in array. Copy the contents of the objects character array into the temporary array, and then concatenate the passed in arrays contents onto the temporary array. Delete the current objects character array then copy the pointer of the temporary array into the current objects character array. Update the \_size.
   * [1 mark] Return the current object.