String Class in C++

In C++, in addition to a character array, there exists a similar kind of way to implement string, that is using a string class which is a part of C++ standard library.

We need to add a header file to implement string using string class. The basic difference between a character array and a string is, in the case of a character array, the size has to be allotted at the time of declaration, i.e all memory once allocated is fixed and cannot be altered at run time. Whereas, for string, there is no need to specify the size and to allocate fixed memory at the time of declaration.

```
// C++ Program to Demonstrate String Class
#include<iostream>
// for string class
#include<string>
using namespace std;
int main()
{
    // Size has to be predefined in character array
    char str[80] = "GeeksforGeeks";

    // Size not predefined in string
    string s("GeeksforGeeks");

    // Printing character array and string
    cout << str << endl;
    cout << s << endl;
    return 0;
}
```

Output

```
GeeksforGeeks
GeeksforGeeks
```

Some useful String Functions

1. compare(string_to_compare):

It is used to compare two strings. It returns the difference between the second string and the first string in the integer.

2. find(“string”):

Searches the string for the first occurrence of the substring specified in arguments. It returns the position of the first occurrence of substring.

3. find_first_of(“string”):

Searches the string for the first character that matches any of the characters specified in its arguments. It returns the position of the first character that matches.

4. find_last_of(“string”):

Searches the string for the last character that matches any of the characters specified in its arguments. It returns the position of the last character that matches.

5. rfind(“string”):

Searches the string for the last occurrence of the substring specified in arguments. It returns the position of the last occurrence of a substring

6. insert(pos_to_begin,string_to_insert):

This function inserts the given substring in the string. It takes two arguments, first the position from which you want to insert the substring and second the substring.

7. clear( ):

This function clears all the characters from the string. The string becomes empty (length becomes 0) after this operation.

8. empty( ):

Tests whether the string is empty. This function returns a Boolean value.