C++ Library - <string>

String is a class and all objects that in string represent sequences of characters.

## **Declaration**

Following is the declaration for std::string.

typedef basic\_string<char> string;

[**http://www.yolinux.com/TUTORIALS/LinuxTutorialC++StringClass.html**](http://www.yolinux.com/TUTORIALS/LinuxTutorialC++StringClass.html)

#include<iostream>

#include <string>

#include <cstring>

using namespace std;

int main () {

string str1, str2, str3;

str1 = "Test string: ";

str2 = "abc def";

//char \*name = "Saurav";

cout <<"str1 = "<<str1 <<endl;

cout <<"str2 = "<<str2 <<endl;

// 1. Swap two strings

str1.swap(str2);

cout <<"str1 = "<<str1 <<endl;

cout <<"str2 = "<<str2 <<endl;

//1.b Length(), size(), capacity()

cout <<"Length = "<<str1.length() <<endl;

cout <<"size = "<<str1.size() <<endl;

cout <<"capacity = "<<str1.capacity() <<endl;

cout <<"max\_size = "<<str1.max\_size() <<endl;

// c\_str()

// char \*charptr = str1.c\_str(); //Wrong

char \*charptr = new char [str1.length()+1];;

strcpy (charptr, str1.c\_str());

cout<<"charptr = "<<charptr<<endl;

//2. Append two string

str3 = str1 +" "+ str2;

cout <<"str3 = "<<str3 <<endl;

//2.a Append two string

str1.append(str2);

cout <<"str1 = "<<str1 <<endl;

//2.b Append a character using push\_back()

str3 = str1;

str3.push\_back('C');

cout <<"str3 = "<<str3 <<endl;

//2.c copy() -> copy string into char\*

char myName[20] = "";

str2.copy(myName, 6,3);

cout<<"copy() -> "<<myName<<endl;

// str3.push\_back("A String"); -> Error: usage - push\_back( Char )

//cout <<"str3 = "<<str3 <<endl;

//3.a Insert characters.

str3="";

str3.erase(); // clear the content from string.

str3.insert(0, str2);

cout <<"str3 = "<<str3 <<endl;

str3.insert(4, str1);

cout <<"str3 = "<<str3 <<endl;

str3.insert(6, "Saurav", 2,3);

cout <<"str3 = "<<str3 <<endl;

//4. find()

string str4("Wipro is an Indian MNC. Wipro contributes to noble cause. TCS is another MNC. TCS has many campuses and an Saa..... ");

cout<<"String 4 = "<<str4<<endl;

int findPos = 0;

findPos = str4.find("an");

cout<<"Find 1 = "<<str4.find("an")<<endl;

if(str4.find("abc") == string::npos) cout << "Not found" << endl; // "npos"

cout<<"Find 2 = "<<str4.find(" an ", 1)<<endl;

cout<<"Find 2 = "<<str4.find(" an ", 10)<<endl;

if(str4.find(" an ", 10, 20) == string::npos) cout <<"Find 3 = "<< "Not found" << endl;

else cout<<"Find 3 = "<<str4.find(" an ", 10, 20)<<endl;

if(str4.find("an", 1, 110) == string::npos) cout <<"Find 4 = "<< "Not found" << endl;

else cout<<"Find 4 = "<<str4.find(" an ", 1, 110)<<endl;

cout<<"Find 4 = "<<str4.find(" an ", 10, 10)<<endl;

return 0;

}