



## Lesson 8 CPP String

C++ provides following **two types** of string representations:

1. The C-style character string.
2. The string class type introduced with Standard C++.

Example :

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
int main() {
```

```
    string x = "Gammal Tech";
```

```
    cout << x;
```

```
}
```

**output:**

Gammal Tech

**If we want to know the number of letters in a String :**

We use x.size() :

```
string x = "Gammal Tech",y;
```

```
cout << y.size() << " " << x.size();
```



**output:**

0 11

**How to clear a string :**

```
string x = "Gammal Tech";
```

```
x.clear();
```

```
cout<<x;
```

output:

//Will print nothing because it's empty

In C we used to include the **h.string** library and use the strcmp(); command. In Cpp we can compare the string

using ==

Example:

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
int main() {
```

```
string x = "Gammal Tech";
```

```
y=x
```

```
if (y==x)
```

```
cout << "Equal"
```

```
}
```



**output:**

Equal

We can also use **strings** with **vectors** and we will sort them :

```
#include <iostream>
```

```
#include <vector>
```

```
#include <string>
```

```
#include <algorithm>
```

```
using namespace std;
```

```
int main() {
```

```
vector <string> x;
```

```
x.push_back("Gammal Tech");
```

```
x.push_back("www.gammal.tech");
```

```
x.push_back("C++ Programming");
```

```
x.push_back("Gammal Tech");
```

```
sort(x.begin(), x.end());
```

```
cout << x.size()<<endl;
```

```
for (int i = 0; i < x.size(); i++)
```

```
cout << x[i]<<endl;
```

```
}
```

**output:**

4 //size



C++ Programming

Gammal Tech

Gammal Tech

www.gammal.tech

We can also use **strings** with **sets** and they will be sorted automatically them :

```
#include <iostream>
#include <set>
#include <string>
#include <algorithm>
using namespace std;
int main() {
    set <string> x;
    x.insert("Gammal Tech");
    x.insert("www.gammal.tech");
    x.insert("C++ Programming");
    x.insert("Gammal Tech");
    cout << x.size() << endl;
    set<string> :: iterator it;
    for (it = x.begin(); it != x.end(); it++)
        cout << (*it) << endl;
}
```

**www.gammal.tech**



**output:**

3 //size

C++ Programming

Gammal Tech

www.gammal.tech