



Mastering C++ String Functions



A COMPREHENSIVE GUIDE TO STRING MANIPULATION
TECHNIQUES
VISIT US. WWW.PIITR.ORG | WWW.PIITR.COM



ACTIVE LIVE STREAM CLASS

C++ String Functions

C++ provides a rich set of string functions that allow developers to manipulate and work with strings efficiently. These functions are part of the C++ Standard Library and can be accessed by including the `<string>` header file. Below is an overview of some commonly used string functions in C++.

1. Length & Size Functions

✦ `length()` & `size()` – Both return the number of characters in a string.

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
int main() {
```

```
    string str = "Hello";
```

```
    cout << "Length: " << str.length() << endl;
```

```
    cout << "Size: " << str.size() << endl;
```

```
    return 0;
```

```
}
```

Output:

Length: 5

Size: 5

2. Concatenation Functions

✦ + Operator & append() – Used to join two strings.

```
string s1 = "Hello", s2 = " World";
```

```
string result = s1 + s2; // Using +
```

```
cout << result << endl;
```

```
s1.append(s2); // Using append()
```

```
cout << s1 << endl;
```

Output:

Hello World

Hello World

3. Access Characters in a String

✦ at(index) & [] Operator

string str = "Programming"	
cout << str.at(2) << endl	// Output: o
cout << str[2] << endl	// Output: o

4. Insert & Erase Functions

- ✦ `insert(pos, str)` – Inserts a substring at a given position.
- ✦ `erase(pos, length)` – Removes characters from the string.

```
string str = "Hello!";  
  
str.insert(5, " World"); // Insert " World" at position 5  
  
cout << str << endl;  
  
str.erase(5, 6); // Erase " World" (6 characters from index 5)  
  
cout << str << endl;
```

Output:

Hello World!

Hello!

5. Find & Replace Functions

- ✦ `find(str)` – Finds the position of the first occurrence of a substring.
- ✦ `replace(pos, len, newStr)` – Replaces part of a string.

```
string str = "I love coding!";  
  
size_t pos = str.find("coding");  
  
cout << "Position: " << pos << endl;  
  
str.replace(pos, 6, "C++"); // Replace "coding" with "C++"  
  
cout << str << endl;
```

Output:

Position: 7

I love C++!

6. Substring Function

✦ `substr(pos, len)` – Extracts a substring from a string.

<code>string str = "Hello World"</code>	
<code>string sub = str.substr(6, 5)</code>	<code>// Extract "World"</code>
<code>cout << sub << endl</code>	

7. String Comparison

✦ `compare(str)` – Compares two strings (returns 0 if equal, negative if smaller, positive if greater).

```
string s1 = "Apple", s2 = "Banana";
```

```
if (s1.compare(s2) == 0)
```

```
    cout << "Strings are equal";
```

```
else
```

```
    cout << "Strings are not equal";
```

Output:

Strings are not equal

8. Convert String to C-Style Char Array

✦ `c_str()` – Returns a pointer to a C-style character array.

<code>string str = "Hello"</code>	
<code>const char* cstr = str.c_str()</code>	
<code>cout << cstr << endl</code>	

9. Changing Case (Uppercase & Lowercase)

♥ Convert to Uppercase/Lowercase using transform()

```
#include <algorithm>

#include <iostream>

#include <string>

using namespace std;

int main() {

    string str = "Hello World";

    // Convert to uppercase

    transform(str.begin(), str.end(), str.begin(), ::toupper);

    cout << "Uppercase: " << str << endl;

    // Convert to lowercase

    transform(str.begin(), str.end(), str.begin(), ::tolower);

    cout << "Lowercase: " << str << endl;

    return 0;

}
```

Output:

Uppercase: HELLO WORLD

Lowercase: hello world

10. String to Integer & Vice Versa

♥ Convert String to Integer: stoi()

♥ Convert Integer to String: to_string()

```
string str = "123";
```

```
int num = stoi(str); // String to Integer
```

```
cout << num + 10 << endl; // Output: 133
```

```
int val = 456;
```

```
string s = to_string(val); // Integer to String
```

```
cout << s + " is a number" << endl;
```

Output:

133

456 is a number



FUTURE TECHNOLOGY

OUR BEST CLASS



✓ Support 24X7 DAY

✓ COADING

✓ LIVE STREAM CLASS

✓ E.BOOKS



Contact Us

Visit Our Website

www.piitr.org | www.piitr.com

LIVE
STREAM

