

Cpp Nuances

Nathan Warner



**Northern Illinois
University**

Computer Science
Northern Illinois University
United States

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Converting char to std::string

Suppose we have a char variable, and we need to "convert" it to a string. To do this we use the string class constructor, which has two parameters, the size of the string to create, and the character to use as the fill.

1.1 Constructor signature

```
1  string(size_t n, char x)
```

1.2 Example

```
1  char c = 'a';  
2  string s(1,c);
```

std::string::npos

Concept 1: In C++, `std::string::npos` is a static member constant value with the greatest possible value for an element of type `size_t`. This value, when used as the length in string operations, typically represents "until the end of the string." It is often used in string manipulation functions to specify that the operation should proceed from the starting position to the end of the string, or until no more characters are found.

2.1 Example

```
1 string infix = buffer.substr(index + 2, string::npos);
```

`std::string::npos` is defined as the maximum value representable by the type `size_t`. This value is typically used to signify an error condition or a not-found condition when working with strings and other sequence types. However, when used as a length argument in methods like `std::string::substr`, it effectively becomes a directive to process characters until the end of the string. This is because any attempt to access beyond the end of the string would exceed the string's length, and the methods are designed to stop processing at that point.