C++ String Functions Cheat Sheet

1. Declaration & Initialization

std::string s = "hello";

std::string s2(5, 'a');   // "aaaaa"

std::string s3 = s.substr(1, 3); // "ell"

2. Basic Info

s.length() / s.size() - Length of string

s.empty() - Returns true if empty

s[i] - Access character

s.front() - First character

s.back() - Last character

s.clear() - Removes all characters

3. Modification

s += "abc" - Append string

s.append("abc") - Append string

s.push_back('x') - Append character

s.pop_back() - Remove last character

s.insert(pos, "xyz") - Insert at position

s.erase(pos, len) - Erase substring

s.replace(pos, len, "xyz") - Replace substring

4. Substring & Comparison

s.substr(pos, len) - Substring from pos

s == s2, s != s2 - Compare strings

s.compare(s2) - Lexicographical compare (0 = equal)

5. Searching

s.find("abc") - Find first occurrence

s.rfind("abc") - Find last occurrence

s.find_first_of("aeiou") - First of any char from set

s.find_last_of("aeiou") - Last of any char from set

s.find_first_not_of("abc") - First char not in set

6. Transformations

std::reverse(s.begin(), s.end()) - Reverse string

std::sort(s.begin(), s.end()) - Sort characters

std::transform(s.begin(), s.end(), s.begin(), ::tolower) - To lowercase

std::transform(s.begin(), s.end(), s.begin(), ::toupper) - To uppercase

std::unique(s.begin(), s.end()) - Remove consecutive duplicates (resize needed)

7. Conversions

std::stoi(s) - String to int

std::stoll(s) - String to long long

std::stod(s) - String to double

std::to_string(n) - Number to string

8. Iteration

for (char c : s) { }

for (int i = 0; i < s.size(); ++i) { }

for (auto it = s.begin(); it != s.end(); ++it) { }

9. Splitting Using stringstream

#include <sstream>

std::stringstream ss(s);

std::string word;

while (ss >> word) { /* process word */ }

10. C-style Interfacing

s.c_str() - const char* pointer

s.data() - Pointer to internal buffer