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#include <algorithm>
#include <iterator>
#include <iostream>
#include <vector>
#include <string>
#include <cctype>
#include <functional>

using namespace std;

auto searchString(const string& ref, const string& s,
    function<bool(unsigned char, unsigned char)> pred =
        std::equal_to<unsigned char>()) {

    return search(begin(ref), end(ref), begin(s), end(s), pred);
}

std::function<bool(unsigned char, unsigned char)> equal_ignore_case =
    [](unsigned char rc, unsigned char sc) -> bool {
        return tolower(rc) == tolower(sc);
    };

int main() {
    string dna = "GATATATACAGGTACCCAATTTACAGATACAAATTTTAAGGAAGAGATATACACACA";
    string text = "Can i match my name JaMeS?";

    auto it = searchString(dna, "GATACA");
    if (it != end(dna)) {
        cout << "Found GATACA at position: " << distance(cbegin(dna), it) << "\n";
    }

    it = searchString(text, "james", equal_ignore_case);
    if (it != end(text)) {
        cout << "Found james at position: " << distance(cbegin(text), it) << "\n";
    }

    return 0;
}
```