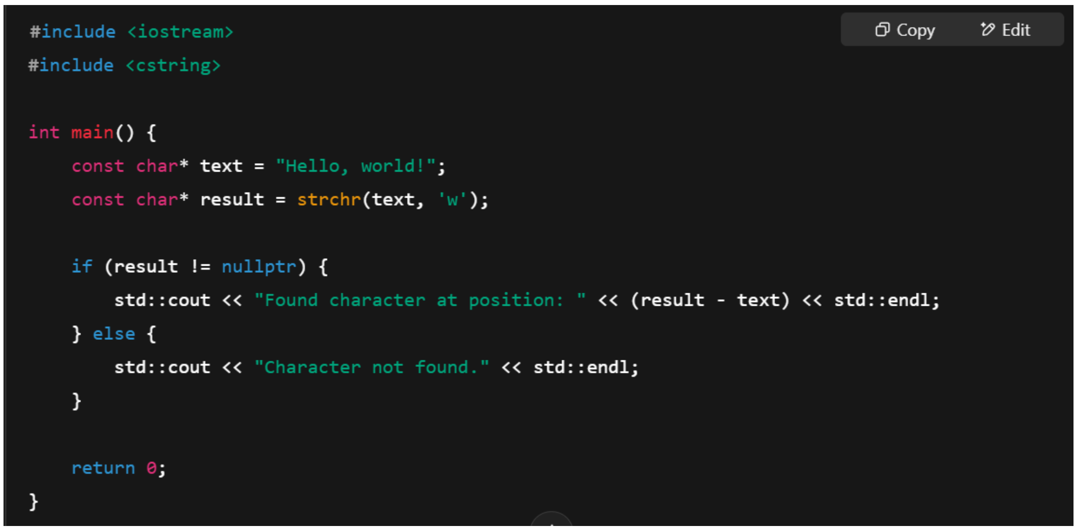
CPP NOTES – DAY 13

String func cont..

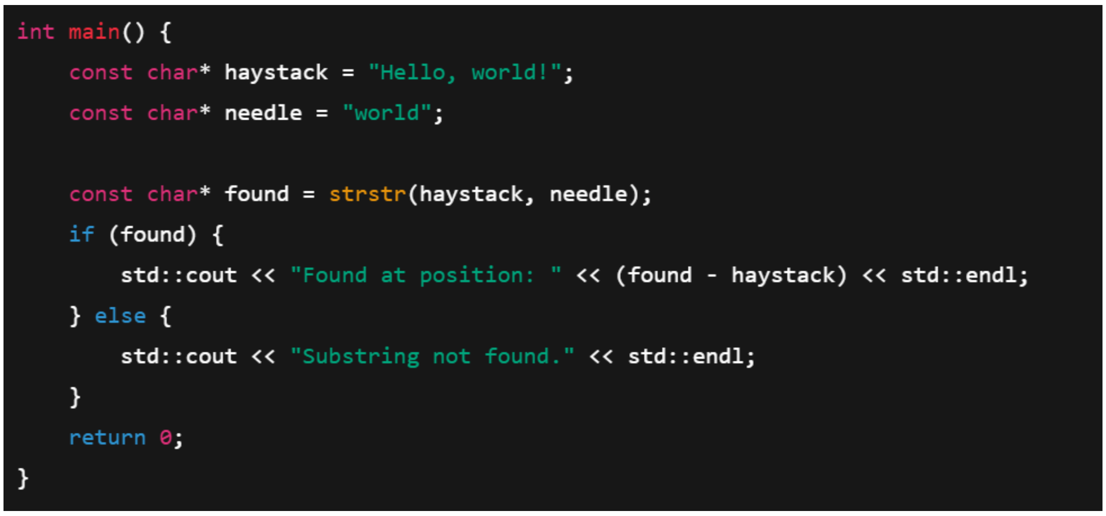
- **strchr:** is a C-style string function from the C standard library (in <cstring>) used to find the first occurrence of a character in a C-style null-terminated string.



```cpp
#include <iostream>
#include <cstring>

int main() {
    const char* text = "Hello, world!";
    const char* result = strchr(text, 'w');

    if (result != nullptr) {
        std::cout << "Found character at position: " << (result - text) << std::endl;
    } else {
        std::cout << "Character not found." << std::endl;
    }

    return 0;
}
```

o/p: Found character at position: 7

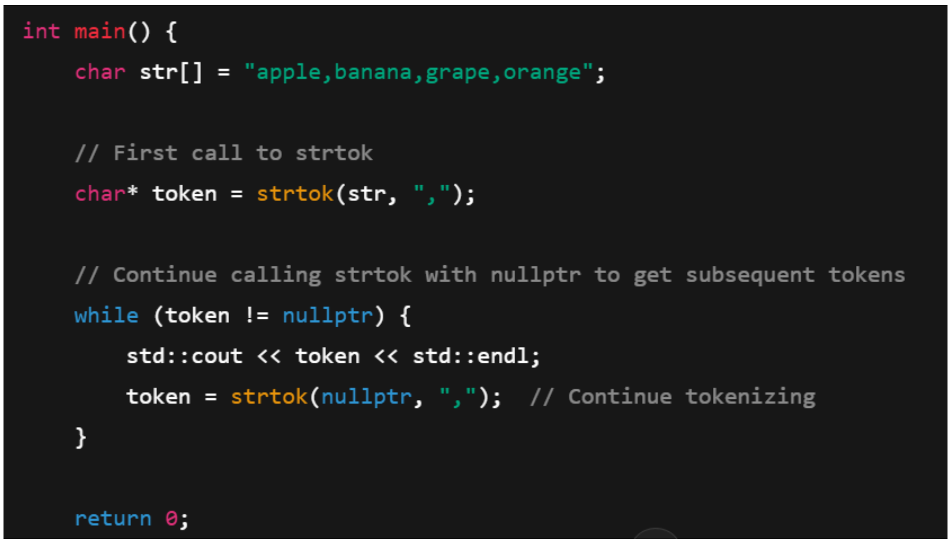
- **strstr:** is a C-style function that finds the first occurrence of a substring in a C-string (null-terminated character array).



```cpp
int main() {
    const char* haystack = "Hello, world!";
    const char* needle = "world";

    const char* found = strstr(haystack, needle);
    if (found) {
        std::cout << "Found at position: " << (found - haystack) << std::endl;
    } else {
        std::cout << "Substring not found." << std::endl;
    }
    return 0;
}
```

o/p: Found at position: 7

- **strtok:** is a C-style string function used to tokenize (split) a string into a series of substrings based on a set of delimiter characters. It's defined in the <cstring> header.
- char* strtok(char* str, const char* delimiters);
- str: The string to be tokenized. In the first call, this should be the string to split. On subsequent calls, it should be nullptr (to continue tokenizing the same string).
- delimiters: A string containing the characters that will be used as delimiters (e.g., space, comma, etc.).



```
int main() {
    char str[] = "apple,banana,grape,orange";

    // First call to strtok
    char* token = strtok(str, ",");

    // Continue calling strtok with nullptr to get subsequent tokens
    while (token != nullptr) {
        std::cout << token << std::endl;
        token = strtok(nullptr, ",");  // Continue tokenizing
    }

    return 0;
```

FYI:

- *In C++, string literals like "Hello, world!" are of type const char[] (read-only), so you should use const char* to safely reference them.*
  Eg: const char text = "Hello, world! ";.*

- *You cannot write char text = "Hello, world!"; because "Hello, world!" is not a single char — it's a C-style string (an array of characters), and assigning it to a single char causes a type mismatch.*
- *At strtok, the null reference 2 is to fetch the delimiter of the input buffer until the null character.*

- *Segmentation coredom/fault: ccurs when a program tries to access a memory location that it's not allowed to access. This often results in the program crashing and generating a core dump, which is a file containing the program's memory at the time of the crash.*