

```
➤ make -s
➤ ./main
a: 125
b: 20
c: 64
d: 59
e: 205
f: 43
g: 49
h: 56
i: 102
j: 1
k: 5
l: 80
m: 41
n: 110
o: 106
p: 51
r: 116
s: 118
t: 145
u: 73
v: 15
w: 36
x: 4
y: 15
z: 1
➤
```

```
//Kenry Yu
```

```
//Olenka Bilinska
```

```
//Demo at 5:25pm
```

```
#include <iostream>
```

```
#include <map>
```

```
using namespace std;
```

```
char isChar(char input) {
```

```
    if ((int)input >= 97 && (int)input <= 122)
```

```
        return input;
```

```
    if ((int)input >= 65 && (int)input <= 90)
```

```

    return (char)(input + 32);
else
    return '\0';
}

```

```

int main() {
    string in;
    map<char, int> qunt;

```

in = "In 1979, Bjarne Stroustrup, a Danish computer scientist, began work on \"C with Classes\", the predecessor to C++.[16] The motivation for creating a new language originated from Stroustrup's experience in programming for his PhD thesis. Stroustrup found that Simula had features that were very helpful for large software development, but the language was too slow for practical use, while BCPL was fast but too low-level to be suitable for large software development. When Stroustrup started working in AT&T Bell Labs, he had the problem of analyzing the UNIX kernel with respect to distributed computing. Remembering his Ph.D. experience, Stroustrup set out to enhance the C language with Simula-like features.[17] C was chosen because it was general-purpose, fast, portable and widely used. As well as C and Simula's influences, other languages also influenced this new language, including ALGOL 68, Ada, CLU and ML. Initially, Stroustrup's \"C with Classes\" added features to the C compiler, Cpre, including classes, derived classes, strong typing, inlining and default arguments.[18] In 1982, Stroustrup started to develop a successor to C with Classes, which he named \"C++\" (++ being the increment operator in C) after going through several other names. New features were added, including virtual functions, function name and operator overloading, references, constants, type-safe free-store memory allocation (new/delete), improved type checking, and BCPL style single-line comments with two forward slashes (//). Furthermore, Stroustrup developed a new, standalone compiler for C++, Cfront. In 1984, Stroustrup implemented the first stream input/output library. The idea of providing an output operator rather than a named output function was suggested by Doug McIlroy[1] (who had previously suggested Unix pipes). In 1985, the first edition of The C++ Programming Language was released, which became the definitive reference for the language, as there was not yet an official standard.[19] The first commercial implementation of C++ was released in October of the same year.[16]";

```

for (char curr_char : in) {
    char curr = isChar(curr_char);
    if (curr != '\0') {
        bool found_char_in_map = false;
        for (pair<char, int> entry : qunt) {
            if (entry.first == curr) {

```

```
        found_char_in_map = true;
        break;
    } else
        continue;
}
if (found_char_in_map) {
    qunt[curr]++;
} else {
    qunt[curr] = 1;
}
}
}
for (pair<char, int> entry : qunt) {
    cout << entry.first << ": " << entry.second << endl;
}
return 0;
}
```