

```
1 #include "KeyProvider.h"
2
3 KeyProvider::KeyProvider(const std::string& aKeyword): fKeyword(new char  ➤
    [aKeyword.length()]), fSize(aKeyword.length()), fIndex(0)
4 {
5     initialize(aKeyword);
6 }
7
8 KeyProvider::~KeyProvider()
9 {
10     delete[] fKeyword;
11 }
12
13 void KeyProvider::initialize(const std::string& aKeyword)
14 {
15     delete[] fKeyword;
16     fSize = aKeyword.length();
17     fKeyword = new char[fSize];
18     for (size_t i = 0; i < fSize; i++)
19     {
20         fKeyword[i] = static_cast<char>(toupper(aKeyword[i]));
21     }
22     fIndex = 0;
23 }
24
25 char KeyProvider::operator*() const
26 {
27     return fKeyword[fIndex];
28 }
29
30 KeyProvider& KeyProvider::operator<<(char aKeyCharacter)
31 {
32     fKeyword[fIndex] = static_cast<char>(toupper(aKeyCharacter));
33     if (++fIndex >= fSize)
34     {
35         fIndex = 0;
36     }
37     return *this;
38 }
```