<https://stackoverflow.com/questions/6963894/how-to-use-range-based-for-loop-with-stdmap>

**Q- How to iterate over a map in c++14 or above**

Each element of the container is a map<K, V>::value\_type, which is a typedef for std::pair<const K, V>. Consequently, in C++17 or higher, you can write

**for (auto& [key, value]: myMap) {**

**std::cout << key << " has value " << value << std::endl;**

**}**

or as

**for (const auto& [key, value]: myMap) {**

**std::cout << key << " has value " << value << std::endl;**

**}**

if you don't plan on modifying the values.

In C++11 and C++14, you can use enhanced for loops to extract out each pair on its own, then manually extract the keys and values:

**for (const auto& kv : myMap) {**

**std::cout << kv.first << " has value " << kv.second << std::endl;**

**}**

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