

## The Map ADT

KV, Winter 2020

```
// Map.h

#include "Pair.h"
#include "Set.h" // insert returns iterator!!!
using namespace std;

template <typename K, typename V>
class Map
{
public:

    Map() {}
    void printMap() const
    {
        typename Set<Pair<K,V> >::iterator itr =
            themap.begin();
        for (; itr != themap.end(); ++itr)
        {
            cout << (*itr).first << ":"
                << (*itr).second << endl;
        }
        return;
    }

    V & operator [] (K index)
    {
        typename Set<Pair<K,V> >::iterator here;
        Pair<K,V> probe(index, V());
        here = themap.insert(probe);
        return (*here).second;
    }
}
```

```
void remove(K & key)
{
    Pair<K,V> probe;
    probe.first = key;
    themap.remove(probe);
    return;
}
private:
    Set<Pair<K,V> > themap;
};
```