```
/* The following code example is taken from the book
 * "The C++ Standard Library - A Tutorial and Reference, 2nd Edition"
 * by Nicolai M. Josuttis, Addison-Wesley, 2012
 *
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 */
#include <string>
#include <iostream>
#include <unordered_set>
#include "../cont/hashval.hpp"
#include <functional>
#include "print.hpp"
using namespace std;

class Customer {
  private:
    string fname;
    string lname;
    long   no;
  public:
    Customer (const string& fn, const string& ln, long n)
      : fname(fn), lname(ln), no(n) {
    }
    string firstname() const {
        return fname;
    };
    string lastname() const {
        return lname;
    };
    long number() const {
        return no;
    };
    friend ostream& operator << (ostream& strm, const Customer& c) {
        return strm << "[" << c.fname << "," << c.lname << "," << c.no << "]";
    }
};

int main()
{
    // lambda for user-defined hash function
    auto hash = [] (const Customer& c) {
        return hash_val(c.firstname(),c.lastname(),c.number());
    };

    // lambda for user-defined equality criterion
    auto eq = [] (const Customer& c1, Customer& c2) {
        return c1.number() == c2.number();
    };

    // create unordered set with user-defined behavior
    unordered_set<Customer,decltype(hash),decltype(eq)> custset(10,hash,eq);
    // ERROR:
```

```
unordered_set<Customer,function<size_t(Customer,Customer)>,decltype(eq)>
custset(10,hash,eq);

    custset.insert(Customer("nico","josuttis",42));
    PRINT_ELEMENTS(custset);

}
```