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/* 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 <unordered_set>
#include <string>
#include <iostream>
#include "hashval.hpp"
#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) {}
    friend ostream& operator << (ostream& strm, const Customer& c) {
        return strm << "[" << c.fname << ", " << c.lname << ", "
            << c.no << "]"";
    }
    friend class CustomerHash;
    friend class CustomerEqual;
};

class CustomerHash
{
public:
    std::size_t operator() (const Customer& c) const {
        return hash_val(c.fname, c.lname, c.no);
    }
};

class CustomerEqual
{
public:
    bool operator() (const Customer& c1, Customer& c2) const {
        return c1.no == c2.no;
    }
};

int main()
{
    // unordered set with own hash function and equivalence criterion
    unordered_set<Customer, CustomerHash, CustomerEqual> custset;

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

```

