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/* The following code example is taken from the book
 * "The C++ Standard Library – A Tutorial and Reference"
 * by Nicolai M. Josuttis, Addison-Wesley, 1999
 *
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 */
#include <iostream>
#include <list>
#include <algorithm>
#include "print.hpp"
using namespace std;

class IntSequence {
private:
    int value;
public:
    // constructor
    IntSequence (int initialValue)
        : value(initialValue) {

        // ``function call''
        int operator() () {
            return value++;
        }
};

int main()
{
    list<int> coll;

    // insert values from 1 to 9
    generate_n (back_inserter(coll), // start
                9, // number of elements
                IntSequence(1)); // generates values

    PRINT_ELEMENTS(coll);

    // replace second to last element but one with values starting at 42
    generate (++coll.begin(), // start
              --coll.end(), // end
              IntSequence(42)); // generates values

    PRINT_ELEMENTS(coll);
}

```