```cpp
/* 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 "algostuff.hpp"
using namespace std;

// function object to process the mean value
class MeanValue {
  private:
    long num;     // number of elements
    long sum;     // sum of all element values
  public:
    // constructor
    MeanValue () : num(0), sum(0) {
    }

    // function call
    // - process one more element of the sequence
    void operator() (int elem) {
        num++;              // increment count
        sum += elem;     // add value
    }

    // return mean value (implicit type conversion)
    operator double() {
        return static_cast<double>(sum) / static_cast<double>(num);
    }
};

int main()
{
    vector<int> coll;

    INSERT_ELEMENTS(coll,1,8);

    // process and print mean value
    double mv = for_each (coll.begin(), coll.end(),  // range
                          MeanValue());               // operation
    cout << "mean value: " << mv << endl;
}
```