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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 <iostream>
#include <valarray>
using namespace std;

// print valarray
template <typename T>
void printValarray (const valarray<T>& va)
{
    for (int i=0; i<va.size(); i++) {
        cout << va[i] << ' ';
    }
    cout << endl;
}

int main()
{
    // define two valarrays with ten elements
    valarray<double> val(10), va2(10);

    // assign values 0.0, 1.1, up to 9.9 to the first valarray
    for (int i=0; i<10; i++) {
        val[i] = i * 1.1;
    }

    // assign -1 to all elements of the second valarray
    va2 = -1;

    // print both valarrays
    printValarray(val);
    printValarray(va2);

    // print minimum, maximum, and sum of the first valarray
    cout << "min(): " << val.min() << endl;
    cout << "max(): " << val.max() << endl;
    cout << "sum(): " << val.sum() << endl;

    // assign values of the first to the second valarray
    va2 = val;

    // remove all elements of the first valarray
    val.resize(0);

    // print both valarrays again
    printValarray(val);
    printValarray(va2);
}

```