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#include <iostream>
#include <algorithm>
#include <iterator>

using namespace std;

struct FibGenerator {
    FibGenerator() {
        n = 1;
        n_1 = 1;
    }

    int operator() () {
        int out = n_1;
        int next = n + n_1;
        n_1 = n;
        n = next;
        return out;
    }

private :
    int n;
    int n_1;
};

int main() {
    int values[10];

    fill(begin(values), end(values), 0);

    values[2] = 55;

    copy(begin(values), end(values), ostream_iterator<int>(cout, " "));
    cout << "\n";

    generate(begin(values), end(values), FibGenerator());

    copy(begin(values), end(values), ostream_iterator<int>(cout, " "));
    cout << "\n";

    return 0;
}
```