```cpp
//
//  Bidirectional and Random-Access Iterator Use
//  main.cpp
//  AbsoluteCpp_ch19_2
//

//Program to demonstrate bidirectional and random-access iterators.
#include <iostream>
#include <vector>
using std::cout;
using std::endl;
using std::vector;

int main() {

    vector<char> container;
    container.push_back('A');
    container.push_back('B');
    container.push_back('C');
    container.push_back('D');

    for (int i = 0; i < 4; i++)
        cout << "container[" << i << "] == "
             << container[i] << endl;

    vector<char>::iterator p = container.begin();
    cout << "The third entry is " << container[2] << endl;
    cout << "The third entry is "<< p[2] << endl;
    cout << "The third entry is " << *(p+2)<< endl;

    cout << "Back to container[0].\n";
    p = container.begin( );
    cout << "which has value " << *p << endl;

    cout << "Two steps forward and one step back:\n";
    p++;
    cout << *p << endl;

    p++;
    cout << *p << endl;
    p--;
    cout << *p << endl;

    return 0;
}
```