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pssc@pssc-virtual-machine: ~
array-1.cpp cleanup.out getpwuid.c readdir stat.c 문서
array-1.out client.c mkdir readdir.c string.cpp 바탕화면
array-2.cpp client.out mkdir.c server.c thread.c 비디오
array-2.out copy.txt moss.pl server.out thread.out 사진
chdir fstat mutex.c signal vector.cpp 음악
chdir.c fstat.c mutex.out signal.c 공개
cleanup.c getpwuid original.txt stat 다운로드

pssc@pssc-virtual-machine:~$ ./array-1.out
elements of arr1: -1081667247 21876 -1081667576 21876 770645240 32767 1 0
elements of arr2: 0 0 0 0 0 0 0 0
elements of arr3: 1 2 3 4 0 0 0 0
elements of arr4(reverse): 8 7 6 5 4 3 2 1
pssc@pssc-virtual-machine:~$ cat array-1.cpp
#include <array>
#include <iostream>

using namespace std;

int main(int argc, char const* argv[]){
    array<int, 8> arr1;
    array<int, 8> arr2 = {0};
    array<int, 8> arr3 = {1,2,3,4};
    array<int, 8> arr4 = {1,2,3,4,5,6,7,8};

    cout << "elements of arr1: ";
    array<int, 8>::iterator iter;
    for(iter = arr1.begin(); iter != arr1.end(); ++iter){
        cout << *iter << " ";
    }
    cout << endl;

    cout << "elements of arr2: ";
    for(size_t i = 0; i < arr2.size(); ++i){
        cout << arr2[i] << " ";
    }
    cout << endl;
    cout << "elements of arr3: ";
    for(size_t i = 0; i < arr3.size(); ++i){
        cout << arr3.at(i) << " ";
    }
    cout << endl;

    cout << "elements of arr4(reverse): ";
    array<int, 8>::reverse_iterator riter;
    for(riter = arr4.rbegin(); riter != arr4.rend(); ++riter){
        cout << *riter << " ";
    }
}

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cleanup.c  getpwuid  original.txt  stat  다운로드
psc@psc-virtual-machine:~$ ./array-1.out
elements of arr1: -1081667247 21876 -1081667576 21876 770645240 32767 1 0
elements of arr2: 0 0 0 0 0 0 0 0
elements of arr3: 1 2 3 4 0 0 0 0
elements of arr4(reverse): 8 7 6 5 4 3 2 1
psc@psc-virtual-machine:~$ cat array-1.cpp
#include <array>
#include <iostream>

using namespace std;

int main(int argc, char const* argv[]){
    array<int, 8> arr1;
    array<int, 8> arr2 = {0};
    array<int, 8> arr3 = {1,2,3,4};
    array<int, 8> arr4 = {1,2,3,4,5,6,7,8};

    cout << "elements of arr1: ";
    array<int, 8>::iterator iter;
    for(iter = arr1.begin(); iter != arr1.end(); ++iter){
        cout << *iter << " ";
    }
    cout << endl;

    cout << "elements of arr2: ";
    for(size_t i = 0; i < arr2.size(); ++i){
        cout << arr2[i] << " ";
    }
    cout << endl;
    cout << "elements of arr3: ";
    for(size_t i = 0; i < arr3.size(); ++i){
        cout << arr3.at(i) << " ";
    }
    cout << endl;

    cout << "elements of arr4(reverse): ";
    array<int, 8>::reverse_iterator riter;
    for(riter = arr4.rbegin(); riter != arr4.rend(); ++riter){
        cout << *riter << " ";
    }
    cout << endl;

    return 0;
}

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psc@psc-virtual-machine: ~  
psc@psc-virtual-machine:~$ ls  
array-1.cpp  cleanup.out  getpwuid.c  readdir  stat.c  문서  
array-1.out  client.c    mkdir      readdir.c string.cpp 바탕화면  
array-2.cpp  client.out  mkdir.c    server.c  thread.c 비디오  
array-2.out  copy.txt   moss.pl    server.out thread.out 사진  
chdir       fstat      mutex.c    signal    vector.cpp 음악  
chdir.c     fstat.c    mutex.out   signal.c  공개  
cleanup.c   getpwuid   original.txt stat       다운로드  
psc@psc-virtual-machine:~$ ./array-2.out  
elements of arr  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
  
value of arr[0][2]: 1  
value of arr[1][3]: 2  
value of arr[2][2]: 3  
psc@psc-virtual-machine:~$ cat array-2.cpp  
#include <array>  
#include <iostream>  
  
using namespace std;  
  
int main(int argc, char const *argv[]) {  
    array<array<int, 8>, 4> arr = {0};  
    array<array<int, 8>, 4>::iterator row;  
    array<int, 8>::iterator col;  
  
    cout << "elements of arr" << endl;  
    for (row = arr.begin(); row != arr.end(); ++row) {  
        for (col = (*row).begin(); col != (*row).end(); ++col) {  
            cout << *col << " ";  
        }  
        cout << endl;  
    }  
    cout << endl;  
  
    int i = 1;  
  
    for (row = arr.begin(); row != arr.end(); ++row) {  
        (*row).fill(i++);  
    }  
  
    cout << "value of arr[0][2]: ";  
    cout << (arr.front())[2] << endl;
```

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psc@psc-virtual-machine: ~  
elements of arr  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0  
value of arr[0][2]: 1  
value of arr[1][3]: 2  
value of arr[2][2]: 3  
psc@psc-virtual-machine:~$ cat array-2.cpp  
#include <array>  
#include <iostream>  
  
using namespace std;  
  
int main(int argc, char const *argv[]) {  
    array<array<int, 8>, 4> arr = {0};  
    array<array<int, 8>, 4>::iterator row;  
    array<int, 8>::iterator col;  
  
    cout << "elements of arr" << endl;  
    for (row = arr.begin(); row != arr.end(); ++row) {  
        for (col = (*row).begin(); col != (*row).end(); ++col) {  
            cout << *col << " ";  
        }  
        cout << endl;  
    }  
    cout << endl;  
  
    int i = 1;  
  
    for (row = arr.begin(); row != arr.end(); ++row) {  
        (*row).fill(i++);  
    }  
  
    cout << "value of arr[0][2]: ";  
    cout << (arr.front())[2] << endl;  
  
    cout << "value of arr[1][3]: ";  
    cout << (arr.at(1)).at(3) << endl;  
  
    cout << "value of arr[2][2]: ";  
    cout << arr[2][2] << endl;  
  
    return 0;  
}  
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```



```
psc@psc-virtual-machine: ~  
psc@psc-virtual-machine:~$ ls  
array-1.cpp  cleanup.out  getpwuid.c  readdir  stat.c  다운로드  
array-1.out  client.c    mkdir      readdir.c string.cpp 문서  
array-2.cpp  client.out  mkdir.c    server.c  thread.c 바탕화면  
array-2.out  copy.txt   moss.pl    server.out thread.out 비디오  
chdir        fstat      mutex.c    signal    vector.cpp 사진  
chdir.c      fstat.c    mutex.out   signal.c  vector.out 음악  
cleanup.c    getpwuid   original.txt stat      공개 템플릿  
psc@psc-virtual-machine:~$ ./vector.out  
size of v: 3  
capacity of v: 3  
elements of v: 0 0 0  
  
--- After push_back ---  
size of v: 8  
capacity of v: 12  
elements of v: 1 2 3 10 11 12 13 14  
  
--- After pop_back ---  
size of v: 6  
capacity of v: 12  
elements of v: 1 2 3 10 11 12  
psc@psc-virtual-machine:~$ cat vector.cpp  
#include <iostream>  
#include <vector>  
  
using namespace std;  
  
int main(int argc, char const *argv[]) {  
    vector<int> v(3);  
    vector<int>::iterator it;  
  
    cout << "size of v: " << v.size() << endl;  
    cout << "capacity of v: " << v.capacity() << endl;  
    cout << "elements of v: ";  
    for(int i = 0; i < v.size(); ++i) { cout << v[i] << " "; }  
    cout << endl << endl;  
  
    for (int i = 0; i < v.size(); ++i){ v[i] = i + 1;}  
    for (int i=10;i<15;++i) {v.push_back(i);}   
  
    cout << "--- After push_back ---" << endl;  
    cout << "size of v: " << v.size() << endl;  
    cout << "capacity of v: " << v.capacity() << endl;  
  
    cout << "elements of v: ";  
    for (it = v.begin(); it != v.end(); ++it) { cout << *it << " ";}
```

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pvc@pvc-virtual-machine: ~  
capacity of v: 12  
elements of v: 1 2 3 10 11 12 13 14  
  
--- After pop_back ---  
size of v: 6  
capacity of v: 12  
elements of v: 1 2 3 10 11 12  
pvc@pvc-virtual-machine:~$ cat vector.cpp  
#include <iostream>  
#include <vector>  
  
using namespace std;  
  
int main(int argc, char const *argv[]) {  
    vector<int> v(3);  
    vector<int>::iterator it;  
  
    cout << "size of v: " << v.size() << endl;  
    cout << "capacity of v: " << v.capacity() << endl;  
    cout << "elements of v: ";  
    for(int i = 0; i < v.size(); ++i) { cout << v[i] << " "; }  
    cout << endl << endl;  
  
    for (int i = 0; i < v.size(); ++i){ v[i] = i + 1;}  
    for (int i=10;i<15;++i) {v.push_back(i);}  
  
    cout << "--- After push_back ---" << endl;  
    cout << "size of v: " << v.size() << endl;  
    cout << "capacity of v: " << v.capacity() << endl;  
  
    cout << "elements of v: ";  
    for (it = v.begin(); it != v.end(); ++it) { cout << *it << " ";}  
    cout << endl << endl;  
  
    v.pop_back();  
    v.pop_back();  
  
    cout << "--- After pop_back ---" << endl;  
    cout << "size of v: " << v.size() << endl;  
    cout << "capacity of v: " << v.capacity() << endl;  
    cout << "elements of v: ";  
    for (int i = 0; i < v.size(); ++i) { cout << v[i] << " ";}  
    cout << endl;  
  
    return 0;  
}  
pvc@pvc-virtual-machine:~$
```

```
psc@psc-virtual-machine: ~  
array-1.out  client.out  moss.pl      signal      vector.cpp  음악  
array-2.cpp  copy.txt    mutex.c      signal.c    vector.out   템플릿  
array-2.out  fstat      mutex.out    stat        공개  
chdir        fstat.c    original.txt stat.c      다운로드  
chdir.c      getpwuid   readdir      string.cpp  문서  
cleanup.c    getpwuid.c readdir.c    string.out  바탕화면  
cleanup.out  mkdir     server.c     thread.c    비디오  
psc@psc-virtual-machine:~$ ./string.out  
str1: Hello World!  
str (reverse): !dlroW olleH  
  
str2: Bonjour!  
  
--- After swap ---  
str1: Bonjour!  
str2: Hello World!  
psc@psc-virtual-machine:~$ cat string.cpp  
#include <iostream>  
#include <string>  
#include <vector>  
  
using namespace std;  
  
int main(int argc, char const* argv[]){  
    string str1 = "Hello World!";  
    cout << "str1: " << str1 << endl;  
  
    string::reverse_iterator rit;  
    cout << "str (reverse): ";  
    for(rit = str1.rbegin(); rit != str1.rend(); ++rit){  
        cout << *rit;  
    }  
    cout << endl <<endl;  
  
    string str2 = "Bonjour!";  
    cout << "str2: " << str2 <<endl << endl;  
  
    str1.swap(str2);  
  
    cout<<"--- After swap ---" <<endl;  
    cout << "str1: " << str1 <<endl;  
    cout << "str2: " << str2 <<endl;  
  
    return 0;  
}
```