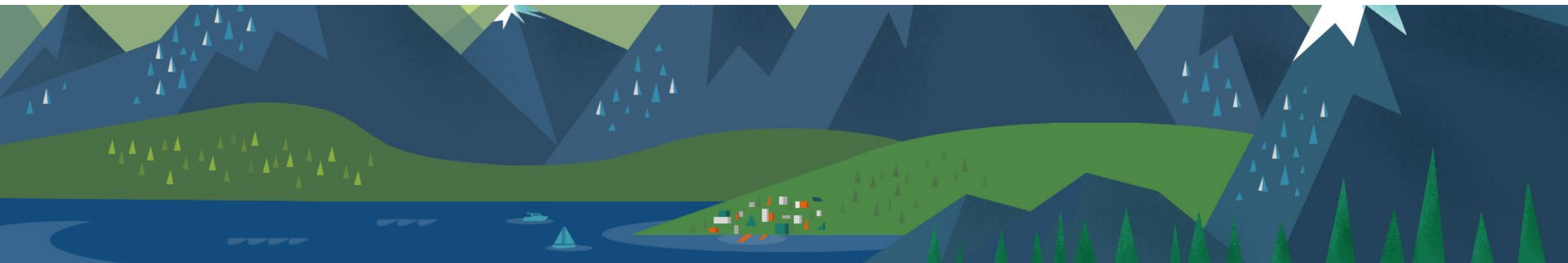




C++da ikki o'lchamlik massivlar



Amaliy mashg'ulotning maqsadi

- Ikki o'lchamlik massivlar bilan ishlash ko'nikmasiga ega bo'lish.



Ikki o'lchamlik massivlarni bir o'lchamlik massivlardan farqi

1 x Massiv

2 x Massiv

```
int arr [];
```



```
int arr [3];
```

```
int arr [3][4];
```

```
int arr [0][3];
```

	Ustun0	Ustun1	Ustun2	Ustun3
qator0	arr[0][0]	arr[0][1]	arr[0][2]	arr[0][3]
qator1	arr[1][0]	arr[1][1]	arr[1][2]	arr[1][3]
qator2	arr[2][0]	arr[2][1]	arr[2][2]	arr[2][3]

Ikki o'lchamlik massivlarda nima saqlasa bo'ladi?



Mehmonxonalarda xonalarni buyurtma qilish tizimi



Masalan, siz ko'p qavatli mehmonxonada to'xtash joylari raqamlarini saqlashingiz mumkin (6 qavat va har birida 15 ta xona mavjud). Buning uchun `int floorsAndrooms[6][15]` ikki o'lchovli massivni e'lon qiling; va uning katakchalariga har bir qavatdagi joylar sonini yozing. Ikki o'lchovli massiv C-satrlarini saqlashi mumkin. Masalan: `char someStr[3][256]`; Shunday qilib, biz har biri 256 ta belgidan iborat 3 qatorni saqlaydigan massivni e'lon qildik.

Ikki o'lchamli massivlar inisalizatsiyasi

```
int floorsAndrooms[2][4] = { { 1, 2, 3, 4 }, { 1, 2, 3, 4 } };
```

```
int floorsAndrooms[2][4]  
{  
{ 1, 2, 3, 4 }, // initsalizatsiya floorsAndrooms[0]  
{ 1, 2, 3, 4 } // inistalizatsiya floorsAndrooms[1]  
};
```




```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     int floorsAndrooms[2][4]
7     {
8         { 1, 2, 3, 4 },
9         { 1, 2, 3, 4 }
10    };
11
12    cout << floorsAndrooms[0][0] << " ";
13    cout << floorsAndrooms[0][1] << " ";
14    cout << floorsAndrooms[0][2] << " ";
15    cout << floorsAndrooms[0][3] << " ";
16    cout << endl;
17
18    cout << floorsAndrooms[1][0] << " ";
19    cout << floorsAndrooms[1][1] << " ";
20    cout << floorsAndrooms[1][2] << " ";
21    cout << floorsAndrooms[1][3] << " ";
22    cout << endl;
23
24    return 0;
25 }
```

/tmp/Qo9mWZsEUe.o

1 2 3 4

1 2 3 4

```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     setlocale(LC_ALL, "eng");
7
8     someStr[3][16]
9     { "ikki-o'lchamli ",
10      "massiv ",
11      "C++\n"
12     };
13
14     cout << someStr[0];
15     cout << someStr[1];
16     cout << someStr[2];
17
18     return 0;
19 }
```

^ /tmp/Qo9mWZsEUe.o

ikki-o'lchamli massiv C++

```
1 #include <iostream>
2 using namespace std;
3
4 int main()
5 {
6     setlocale(LC_ALL, "eng");
7
8     const int AMOUNT_FLOORS = 7; // qavatlar soni
9     const int AMOUNT_ROOMS = 10; // xonlar soni
10    int floorsAndrooms[AMOUNT_FLOORS][AMOUNT_ROOMS]; // ikki
        o'lchamlik massivni belgilash
11
12    // qiymat berish va aks etirish
13    cout << "~~xonalar joylashuvi (0 - joy band qilingan)~~"
        endl << endl;
14
15    for (int f = 0; f < AMOUNT_FLOORS; f++) // kiritilgan
        sikildan foydalanish
16    {
```

```
17     cout << f + 1 << "-qavat: ";
18     for (int p = 0; p < AMOUNT_ROOMS; p++)
19     {
20         floorsAndrooms[f][p] = p + 1; // qiymat kiritish
21         cout << floorsAndrooms[f][p] << " | "; // xonalarni
                kiritish
22     }
23     cout << endl << "
                -----
                " << endl;
24 }
25
26 int floor = 0; // qavat
27 int roomPlace = 0; // xonalar
28 char exit = '1'; // do while dan chiqish
29
30 cout << "xonaga buyurtma berish uchun-qavat va xonaning
        raqamini tanlang.\n";
31
```

```
32 do // tashqi do while
33 {
34     do // ichki do while qavatni tanlash uchun
35     {
36         cout << "qavatning raqamini kiriting: ";
37         cin >> floor;
38
39         if (floor < 1 || floor > 7) // aqav qavat mavjud
            bo'lmasa
40         {
41             cout << "bunday qavat yo'q! qavatlarni 1 dan 7
                gacha tanlang!\n";
42         }
43     } while (floor < 1 || floor > 7);
44
45
46     do // do while jiyini tanlash uchun
47     {
```

```
48     cout << "band qilish rejalashtirilgan xona raqami:  
      ";  
49     cin >> roomPlace;  
50  
51     if (roomPlace < 1 || roomPlace > 10)  
52     {  
53         cout << "bunday raqam yo'q! 1 dan 10 gacha  
          tanlang!\n";  
54     }  
55     } while (roomPlace < 1 || roomPlace > 10);  
56  
57     if (floorsAndrooms[floor - 1][roomPlace - 1] != 0) //  
        joy bo'sh bo'lsa  
58     {  
59         floorsAndrooms[floor - 1][roomPlace - 1] = 0; //  
            buyurtma berilgan bo'lsa habar berish  
60         cout << "\n\nmuvafaqiyatli buyurtma berildi!\n";  
61         cout << "sizning joyingiz: " << floor << "-qavat"  
            <<roomPlace << "-ioy!\n\n":
```

Vazifa

- Berilgan dasturda qaytadan qiymat kiritishda takroriy parameter kiritishda joy band! Qatorini chiqarish vazifasini ko'rib chiqing



```
62 cout << "yana buyurtma berish uchun 1 bosing.  
    chiqish uchun - 0: ";  
63 cin >> exit;  
64 }  
65 else //  
66 {  
67     cout << "\njoy band!\n";  
68  
69     // bo'sh joylarni aks etirish uchun  
70     cout << "~~xonalar jadvali (0 - joy buyurtma  
        qilingan)~~" << endl << endl;  
71  
72     for (int f = 0; f < AMOUNT_FLOORS; f++)  
73     {  
74         cout << f + 1 << "-qavat:  ";  
75         for (int p = 0; p < AMOUNT_ROOMS; p++)  
76         {  
77             cout << floorsAndrooms[f][p] << " | ";  
78         }
```



```
79         cout << endl << "
           -----
           -----" << endl;
80     }
81 }
82 } while (exit != '0');
83
84 return 0;
85 }
```