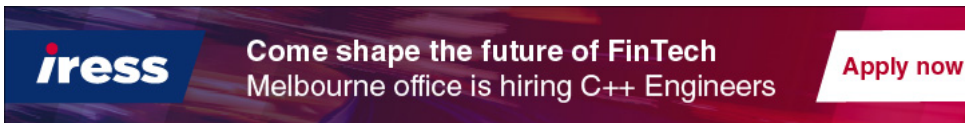


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Initializing a two dimensional std::vector



So, I have the following:

```
std::vector< std::vector<int> > fog;
```

and I am initializing it very naively like:

```
for(int i=0; i<A_NUMBER; i++)
{
    std::vector<int> fogRow;
    for(int j=0; j<OTHER_NUMBER; j++)
    {
        fogRow.push_back( 0 );
    }
    fog.push_back(fogRow);
}
```

And it feels very wrong... Is there another way of initializing a vector like this?

c++ vector

edited Jul 15 '13 at 20:28

asked Jul 15 '13 at 20:21



fritzone

16.7k 9 44 100

- 1 I would recommend a 1d vector implementation for a 2d vector if you don't require more space than `std::vector<int>::max_size()` . [Here](#) – [andre](#) Jul 15 '13 at 20:34

2 Answers

Use the `std::vector::vector(count, value)` constructor that accepts an initial size and a default value:

```
std::vector<std::vector<int>> fog(
    A_NUMBER,
    std::vector<int>(OTHER_NUMBER)); // Defaults to zero initial value
```

If a value other zero, say 4 for example, was required to be the default then:

```
std::vector<std::vector<int>> fog(
    A_NUMBER,
    std::vector<int>(OTHER_NUMBER, 4));
```

And just to mention uniform initialization introduced in c++11, which permits the initialization of vector , and other containers, using `{}` :

```
std::vector<std::vector<int>> fog { { 1, 1, 1 },
                                   { 2, 2, 2 } };
```

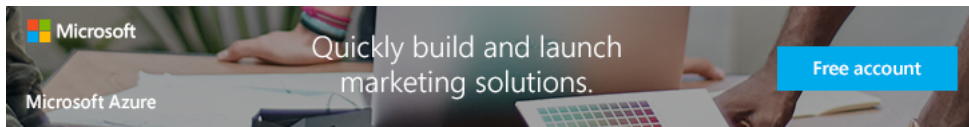
edited Jul 15 '13 at 20:39

answered Jul 15 '13 at 20:24



hmjd

92.3k 9 129 193



There is no `append` method in `std::vector`, but if you want to make a vector containing `A_NUMBER` vectors of `int`, each of those containing `other_number` zeros, then you can do this:

```
std::vector<std::vector<int>>> fog(A_NUMBER, std::vector<int>(OTHER_NUMBER));
```

answered Jul 15 '13 at 20:25



[juanchopanza](#)

169k 17 238 356

about append: just a typo :) thanks! – [fritzone](#) Jul 15 '13 at 20:28
