
Subject: Re: C++11

Posted by [Lance](#) on Sun, 02 Dec 2012 17:47:32 GMT

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And any object can be `std::move()`'ed to become moveable, no matter it's a temporary or not.

```
#include <iostream>
#include <string>
#include <algorithm>
#include <new>

using namespace std;

struct S
{
    S(){}
    S(const S& rhs) : text(rhs.text){}
    S(S&& rhs){
        struct T{ char _[sizeof(S)]; };
        std::swap(reinterpret_cast<T&>(*this),
            reinterpret_cast<T&>(rhs)
        );
    }

    S& operator=(const S& rhs)
    {
        this->~S();
        return *new(this)S(rhs);
    }

    S& operator=(S&& rhs)
    {
        this->~S();
        // std::move() is necessary even when rhs is declared as temporary
        return *new(this)S(move(rhs));
    }

    string text;
};

ostream& operator<<(ostream& os, const S& s)
{
    return os<<s.text<<endl;
}
```

```
S global;
```

```
int main()
```

```
{  
  global.text="This is the global text";  
  cout<<global;
```

```
  S a;  
  a.text="This is object a";
```

```
  //  
  //  
  S b(a);  
  cout<<"after S b(a), now <b> is:"<<b<<"and <a> is:"<<a;
```

```
  S c(std::move(global)); // use move constructor  
  cout<<"after S c=std::move(global), now <c> is:"<<c<<"and <global> is:"<<global;
```

```
}
```
