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Proxy in C++



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"->" and "." operators give different results

```
class Subject
{
public:
    virtual void execute() = 0;
};

class RealSubject: public Subject
{
    string str;
public:
    RealSubject(string s)
    {
        str = s;
    }
    /*virtual*/void execute()
    {
        cout << str << '\n';
    }
};

class ProxySubject: public Subject
{
    string first, second, third;
    RealSubject *ptr;
public:
    ProxySubject(string s)
    {
        int num = s.find_first_of(' ');
        first = s.substr(0, num);
        s = s.substr(num + 1);
        num = s.find_first_of(' ');
        second = s.substr(0, num);
        s = s.substr(num + 1);
        num = s.find_first_of(' ');
        third = s.substr(0, num);
        s = s.substr(num + 1);
        ptr = new RealSubject(s);
    }
    ~ProxySubject()
    {
        delete ptr;
    }
    RealSubject *operator->()
    {
        cout << first << ' ' << second << ' ';
        return ptr;
    }
    /*virtual*/void execute()
```

```
{
    cout << first << ' ' << third << ' ';
    ptr->execute();
}

};

int main()
{
    ProxySubject obj(string("the quick brown fox jumped over the dog"));
    obj->execute();
    obj.execute();
}
```

Output

```
the quick fox jumped over the dog
the brown fox jumped over the dog
```

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