

```
void ECE462Map::insert (key k, Value v) {  
    if (item == size) {  
        size *= 2;  
        key *k2 = new key [size];  
        value *v2 = new value [size];  
  
        for (int i = 0; i < item; i++) { //resize array  
            k2[i] = karray[i];  
            v2[i] = varray[i];  
        }  
        delete[] karray;  
        delete[] varray;  
        karray = k2;  
        varray = v2;  
    }  
    karray [item] = k;  
    varray [item] = v;  
    item++;  
}
```

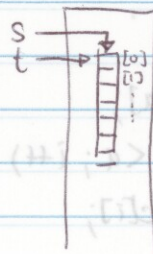
Java creates object by calling new
C++ may implicitly create objects;

- C++
 - constructor
 - copy constructor
 - operator assignment
 - destructor

— shallow / deep copy —

```
Person p (20, "Alice") //C++ stores a copy  
l.add (p);  
p.name = "Deborah"; // still prints Alice
```

```
int *t = new int [10];  
int *s t[0] = 462;  
int *s = t; // type match  
s[0] = 2010;
```



t[0] ? → 2010