

# CS180 - Vectors

Note Title

10/17/2011

## Announcements

- HW due tomorrow night
- Next HW up today
- Midterm is a week from Friday  
(review in class next Thursday)

Recap of runtimes: Stacks / Queues

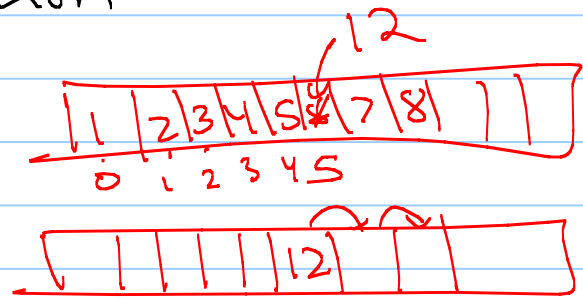
push / pop / top front }  $O(1)$

"hidden" cost:  $O(n)$  to delete  
for linked versions  
but linked versions have  
unlimited capacity

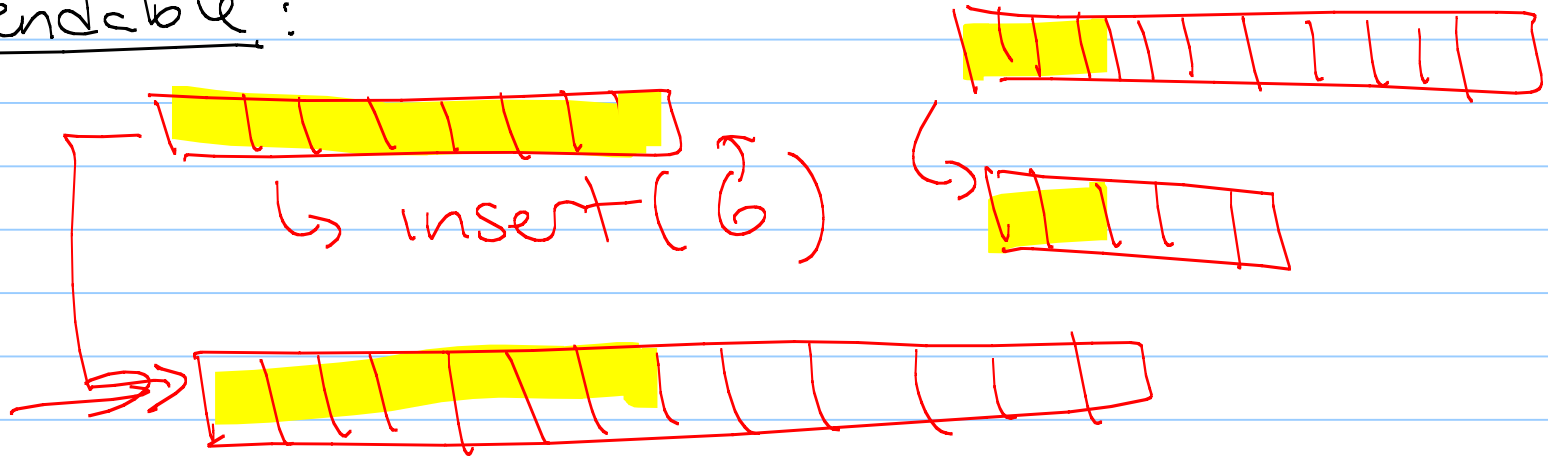
# Vectors

Similar to lists in python

→ myvector [5] = 12;  
myvector.insert(12, 5);



Extendable:

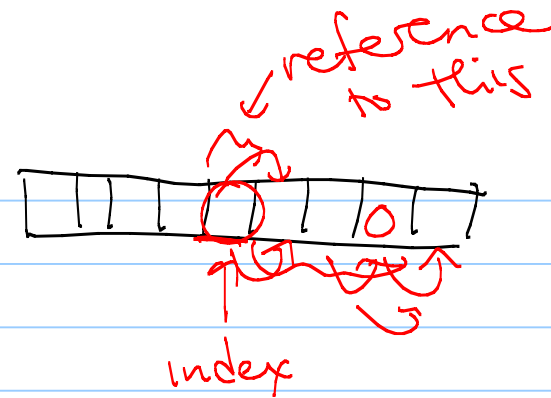


Code:

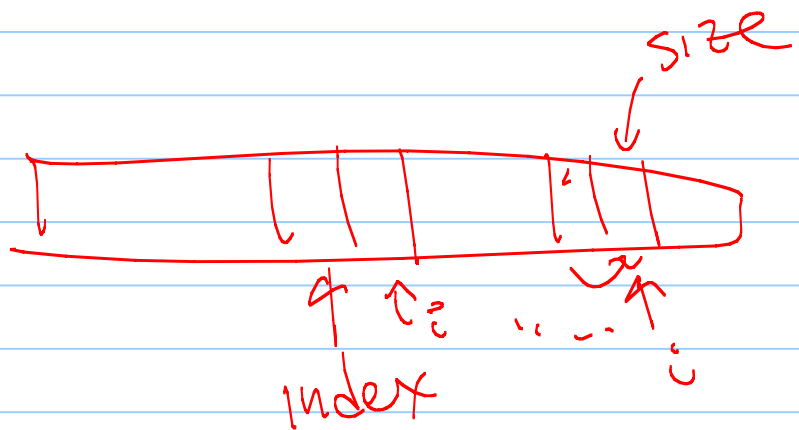
```
private data:  
    int _size;  
    int _capacity;  
    Object* _data;
```

Functions:  
(see STL)

- operator []
- insert



} in constructor:  
\_data = new Object[\_capacity].



# Insert

```
myvec. insert (2, 'c');
```

```
othervec. insert (11, "new");
```

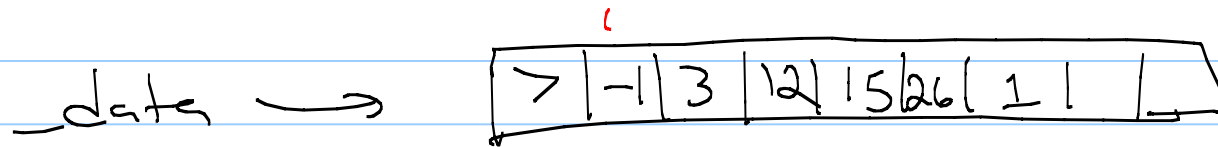
```
anothervec. insert (7, -25);
```

How to insert?  
(What if full?)

## Erase

- take an index & delete that element

Ex: myVec.erase(3)



Another: Operator []

Usage: myvector[6] = 9;



