CS180 - Vectors

Announcements

- Checkpoint today

- Midterms back on Wed.

stack1

Stack2   (no new)

+1
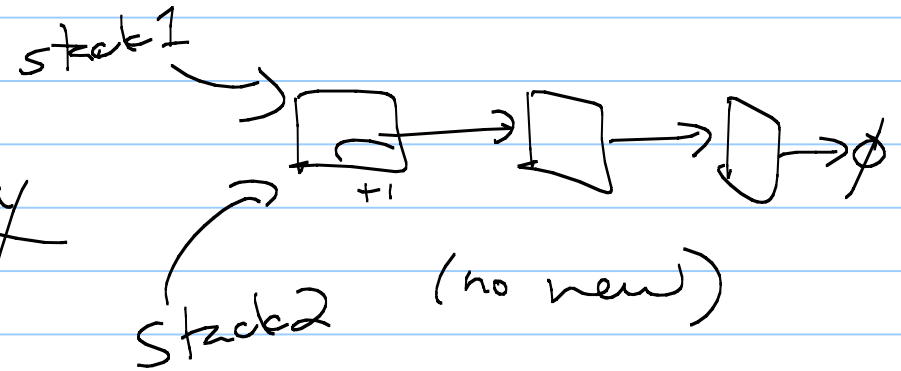
Today: - Extend program due date by 24 hours - due tomorrow by midnight
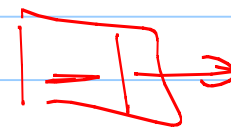- Handed back midterms
- No lab tomorrow

Bugs (from previous code)
Templating and .h/.cpp files

Errors: With templating, easier to have
only 1 file, (.h)

If want 2 files
in .h, include /import the functions
at the end.

-SNode was an internal class
variables _elem, _next
were private

Smart Stack

Segfault — find which line

    cout << "here1" << endl;

Reason: (tp) → refcount ++
                        == 0
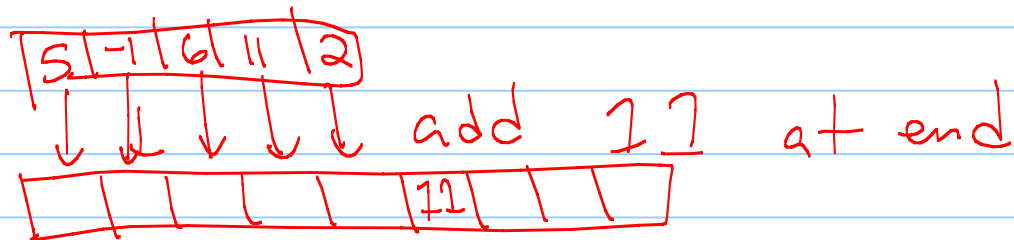   ↑
    if NULL, This is a seg
                        fault

Vectors - Ch 6.1

Similar to lists in python

myvector[5] = 6;

Extendable: When the vector gets full, double the size

5	-1	6	11	2

↓ ↓ ↓ ↓ ↓   add 11 at end

| | | | | | 11 | | | |

Code:
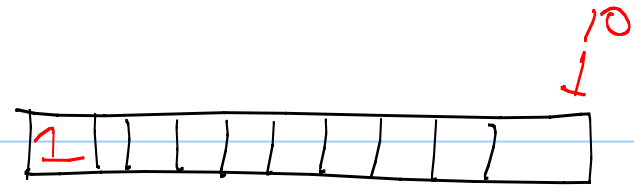
private data:

```
Object *  _data;   // pointer to my array
int       _cap;    // max possible size
int       _size;   // current # of objects in array
```
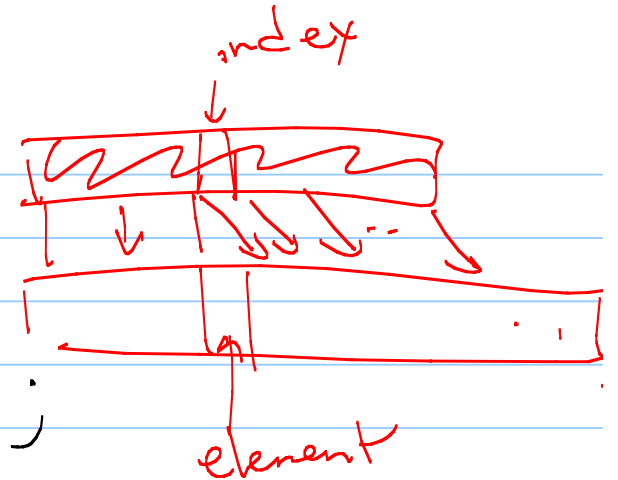
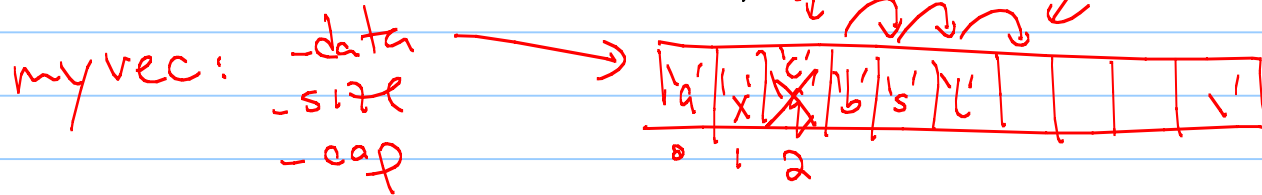Functions:
(see STL)

Constructor
destructor

Insert

position — object   index

myvec. insert (②, 'c');

othervec. insert (11, "new");

anotervec. insert (7, -25);

How to insert?
→ (What if full?)   index = 2   'c'

myvec: _data
        _size   _size
        _cap

$$\text{for loop} \begin{bmatrix} \_data[\_size] = \_data[\_size-1] \\ \_data[\_size-1] = \_data[\_size-2] \end{bmatrix}$$

Erase

- take an index & delete that element

Ex: myVec.erase(3)

data → | 7 | -1 | 3 | ~~14~~ | 15 | 26 | 1 | | |

indices: 0 1 2 3