CS 180 - Lecture 11

Note Title 9/18/2009

Announcements

- Program 1 due tonight
- Homework 3 due Wed. in class (may turn in paper copy)
- Review session Mon. in class (sample midterm handed out today)
- Lab next Wed., exam Thursday
- Boeing scholarship deadline is coming up!

Bug in HW:

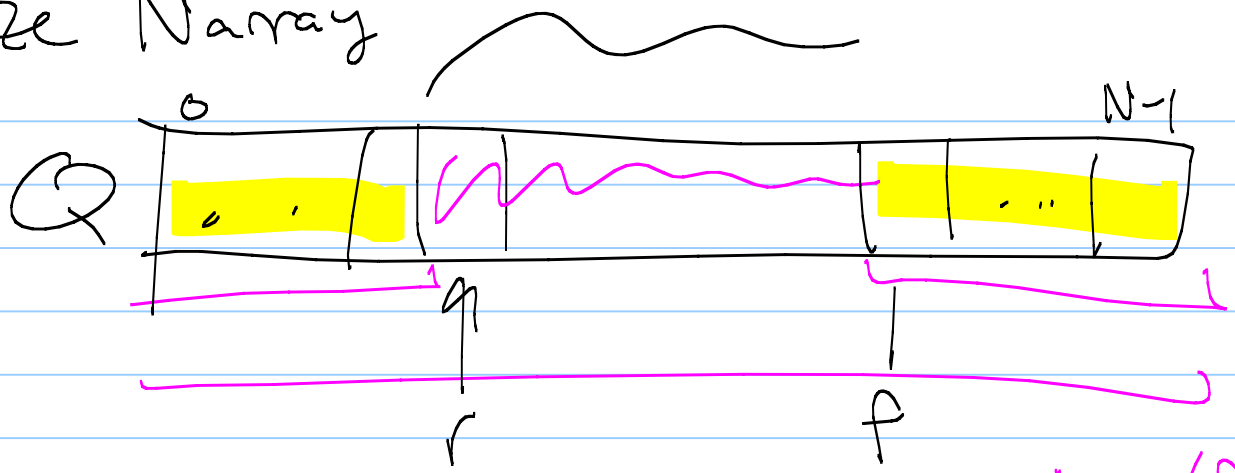
Have push/pop on queue problem.

(should be enqueue/dequeue.)

Queues

- enqueue
- dequeue
- isEmpty
- size
- front

Size Narray



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- modular arithmetic

1 mod 3 = 1
4 mod 3 = 1
3 mod 3 = 0

r % N

Pseudocode

data: Q (an array), N = max size of array
f & r → integers

```
isEmpty()
    return (f = r)

enqueue (element)
    if size() = N
        throw exception
    Q[r] ← element
    r ← (r+1) mod N

size()
    return (N-f+r) mod N
```

if r > f
    return r - f
else // f > r
    return N - (f - r)

Actual code

(on webpage)

Again, based on book's code.