

# FINAL REVIEW

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## Problem Solving with Computers-I

<https://ucsb-cs16-wi17.github.io/>

C++

```
#include <iostream>
using namespace std;

int main(){
    cout<<"Hola Facebook!";
    return 0;
}
```



# Final Exam!

- Monday (06/12) 4pm to 7pm CHEM 1171
- Assigned seating will be posted on Piazza
- Everything we have covered so far is on the exam
- Duration: **3 hours**
- **Closed book: no calculators, no phones, no computers**
- Only 1 sheet (***double***-sided is ok) of written notes
  - Must be no bigger than 8.5" x 11"
  - You have to turn it in with the exam

# Final Exam Review and study session!

- Friday (06/09) 3pm to 6pm PHELPS 3525 (conducted by mentors)
- I will hold extra office hours on Thursday 10am – noon, Friday: 9am to noon

## Final Exam Resources

<https://ucsb-cs16-sp17.github.io/exam/e03/>

# Review

- Pointers
- Linked List
- Recursion

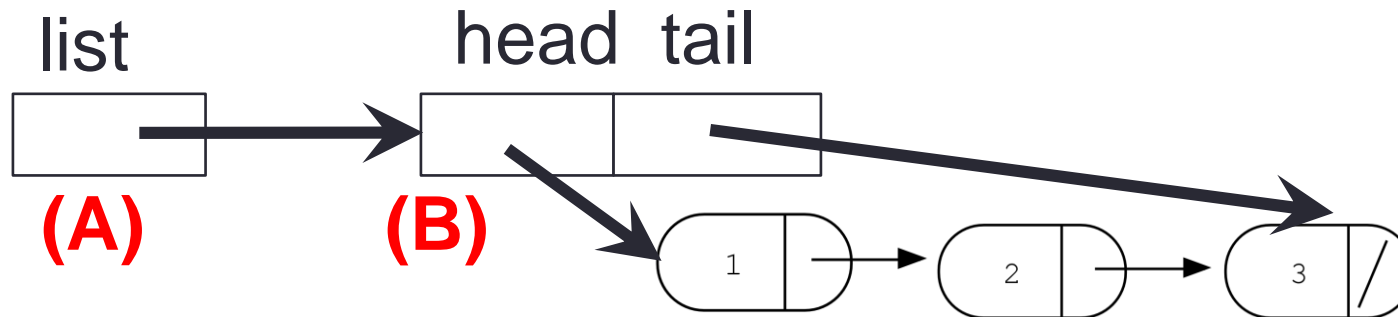
Take notes!

<https://ucsb-cs16-sp17.github.io/exam/e03/>

# Deleting the list

```
int freeLinkedList(LinkedList * list){...}
```

Which data objects are deleted by the statement: **delete list;**



**(C)** All nodes of the linked list

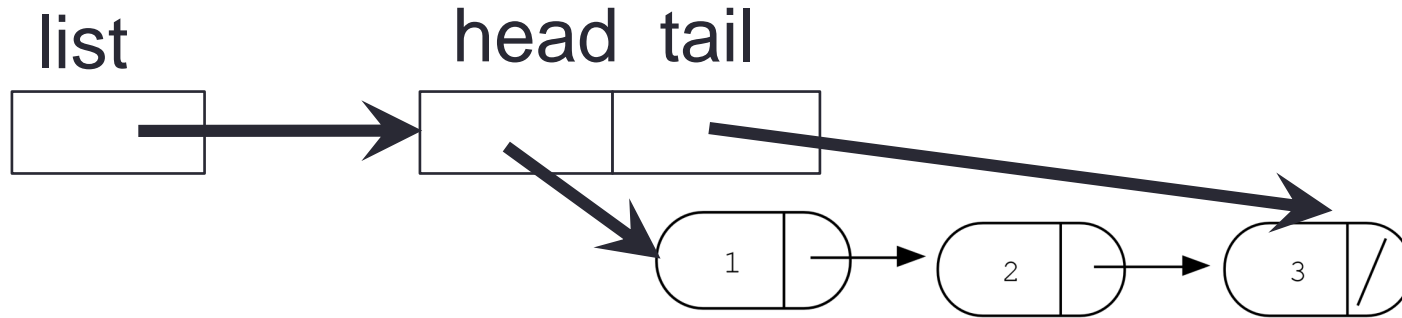
**(D)** B and C

**(E)** All of the above

Does this result in a memory leak?

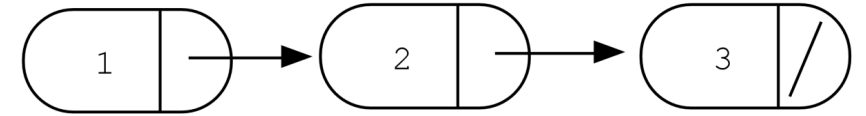
# Delete the list

```
int freeLinkedList(LinkedList * list);
```



# Recursion on lists: delete a value recursively

```
void deleteNodeRecursive(LinkedList *list, int value)
```



```
Node* deleteNodeRecursiveHelper(Node *head, int value)
```



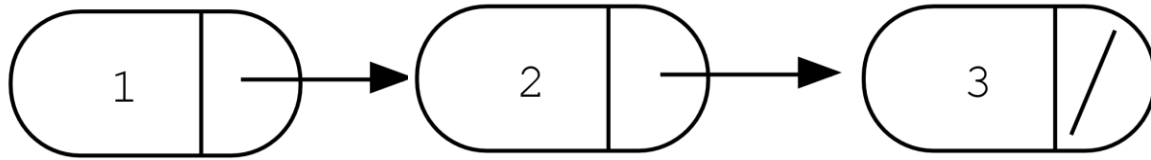
Recall the steps towards a recursive solution

# Searching for a value in a sorted array

10	20	30	40	50	60	70	80
0	1	2	3	4	5	6	7



# How do you decide which data structure to use?



## Some comic relief...



	COMMENT	DATE
○	CREATED MAIN LOOP & TIMING CONTROL	14 HOURS AGO
○	ENABLED CONFIG FILE PARSING	9 HOURS AGO
○	MISC BUGFIXES	5 HOURS AGO
○	CODE ADDITIONS/EDITS	4 HOURS AGO
○	MORE CODE	4 HOURS AGO
○	HERE HAVE CODE	4 HOURS AGO
○	AAAAAAAAA	3 HOURS AGO
○	ADKFJSLKDFJSDKLFJ	3 HOURS AGO
○	MY HANDS ARE TYPING WORDS	2 HOURS AGO
○	HAAAAAAAAAANDS	2 HOURS AGO

AS A PROJECT DRAGS ON, MY GIT COMMIT  
MESSAGES GET LESS AND LESS INFORMATIVE.

[HTTP://XKCD.COM/1296/](http://xkcd.com/1296/)

## Some comic relief



[HTTP://XKCD.COM/138/](http://xkcd.com/138/)

# Good luck with the final!

