

Studying for the finals: Goals

- **Good** student goals: *at least* be able to
 - Redo all exercises in class (e.g. proofs)
 - Reproduce all code in lectures on your own
 - Reproduce all assignment/midterm solutions on your own
- **Great** student goals: *in addition, at least* be able to
 - Teach someone else basic level tasks
 - Convert all pseudocode (e.g. in Stack lecture) to code
 - Recall details in material (e.g. quicksort worst-case run time)
- There's nothing a good final can't fix
- **The above works for most courses!**

Example: Reproduce Merge Code

```
// Pre:  arr[first..mid] and arr[mid+1..last] are sorted
// Post:  arr[first..last] are sorted
void merge(int arr[], int first, int mid, int last) {
    int len = last-first+1;  int newArr[len];
    int left = first;  int right = mid+1;  int newPos = 0;
    while(left <= mid && right <= last) {
        if (arr[left] < arr[right]) {
            newArr[newPos++] = arr[left++];
        } else {
            newArr[newPos++] = arr[right++];
        }
    }
    // Flush non empty piece
    arrCpy(arr + left, newArr + newPos, mid - left + 1);
    arrCpy(arr + right, newArr + newPos, last - right + 1);

    arrCpy(newArr, arr + first, len);
}
```

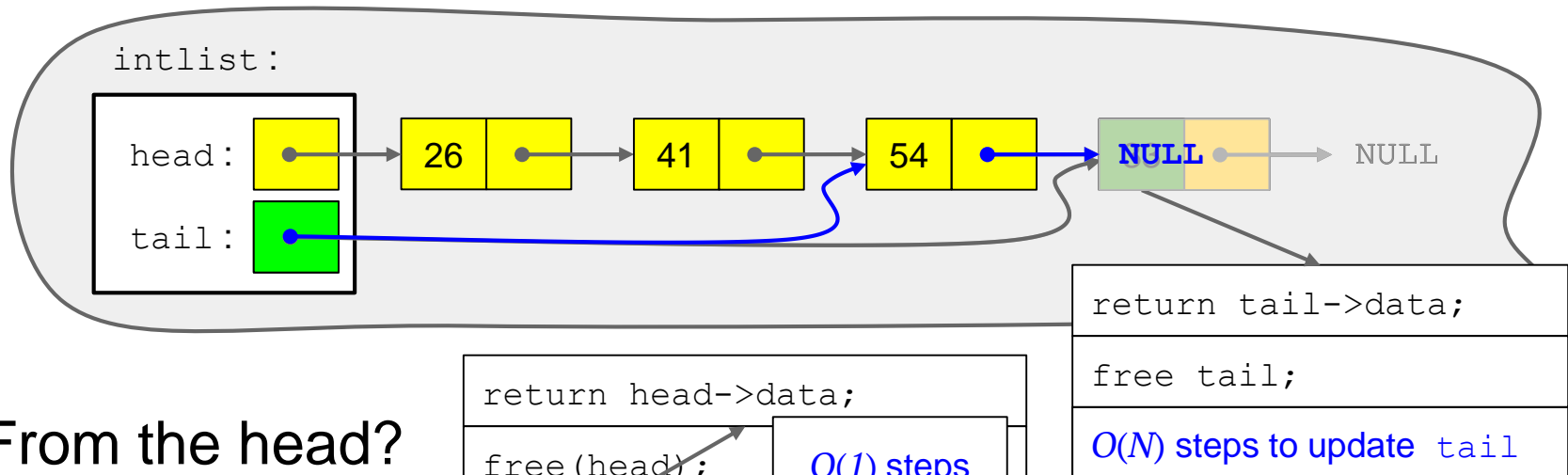
General tips

- Make a cheat sheet, even though you will not be allowed on one on the final
- Regularly review and study, even if there is no due date
 - Your brain needs time to subconsciously process material
- Ask and answer questions on Piazza
- Reward yourself for studying and learning
- Create practice questions for others or do these questions on Piazza

Example: Code Up pop (S)

Q. From which end should you remove an item?

From the tail?



From the head?

