Lecture 9 - February 4

Arrays and Linked Lists

Q: Mixing Insertion & Selection Sorts SLL: Visual Introduction & Operations SLL in Java: Node vs. SinglyLinkedList

Announcements/Reminders

- Assignment 2 (on SLL) to be released soon
- Assignment 1 solution released
- splitArrayHarder: an extended version released
- Lecture notes template available
- Office Hours: 3pm to 4pm, Mon/Tue/Wed/Thu
- Contact Information of TAs on common eClass site



Singly-Linked Lists (SLL): Visual Introduction

N: Ist node n.data == "Alan"

(n.next != n.1/ n.next. data == "Mark"

n.next.next.next. data

NullK

- A chain of connected nodes (via aliasing)
- Each node contains:

next

- + reference to a data object
- + reference to the next node
- Head vs. Tail
- Accessing a position in a linear collection:
 - + Array uses absolute indexing: O(1)
 - + SLL uses relative positioning: O(n)

M

– The chain may grow or shrink dynamically.

next

null





A SLL Grows or Shrinks Dynamically



Implementing SLL in Java: SinglyLinkedList vs. Node

