Data Structures

* e.g. ArrayList
* Data Structure is a class that allows the mass storage of data
  + Add unlimited amounts of data
  + Delete data that has been added
* By contrast, an Array in Java allocates a limited amount of memory up front – if you want to store more data, you are out of luck

Today we are going to look at the very simplest form of data structure – linked list

A linked list stores data as follows:

* Elements of data are packaged into “nodes”
* The node stores:
  + The data
  + A reference to the NEXT node in the list
  + If there is no next node (i.e., this node is at the end of the list), then the next reference is null
* All you need for the linked list is the location of the “head” of the list – i.e. a reference to the first element in the list
* This is a very simple way to flexibly store data – it’s not very efficient
* The tricky part in a linked list is figuring out how to add and delete nodes

To add:

* Add to the head