

### Announcements

1

- A3 will available on Piazza tomorrow. Refer often to the Piazza FAQ Note for A3.
- Please read the assignment A3 FAQ Notes on the Piazza before asking a question. It might already be answered.

### Assignment A3: Linked Lists

2

Idea: maintain a list (2, 5, 7) like this:

```

graph LR
    h[ ] --> a1[a1]
    a1 --> a6[a6]
    a6 --> a8[a8]
    a8 --> null[null]
    subgraph Node [ ]
        a1
        a6
        a8
    end
    subgraph Value [ ]
        v1[v 2]
        v2[v 5]
        v3[v 7]
    end
    subgraph Next [ ]
        n1[next a6]
        n2[next a8]
        n3[next null]
    end
    Node --- Value
    Node --- Next
    
```

This is a singly linked list

To save space, we write names like a6 instead of N@35abcd00

### How to insert a node at the beginning

3

(2, 5, 7)

(8, 2, 5, 7)

### How to remove successor of a node in the middle

4

(2, 5, 8, 7)

(2, 5, 7)

### Assignment A3: Generics

5

```

public class LinkedList {
    void add(Object elem) {...}
    Object get(int index) {...}
}

public class LinkedList<E> {
    void add(E elem) {...}
    E get(int index) {...}
}

ns = new LinkedList<Integer>();
ns.add("Hello"); // error
ns.add(5);
String s = ns.get(0); // error
int n = ns.get(0);

ss = new LinkedList<String>();
ss.add("Hello");
ss.add(5); // error
String s = ss.get(0);
int n = ss.get(0);

```

Values of linked list are of class Object

You can specify what type of values