Abstract Data Types: Lists 2

A List interface and its implementation: Linked List
List Implementation: Linked Lists

- **Arrays**
  - Fast lookup of any element
  - A little messy to grow and contract

- **Linked list**
  - Logical fit to a list, easy to grow, contract
  - Need to traverse list to find arbitrary element

```java
public class LinkedList<T> {
    private class LLNode<T> {
        T value;
        LLNode<T> next;
    }
    LLNode<T> start;
    LLNode<T> end;
}
```
Linked List Reversal Implementations

New list

A → B → C → D
start

C → B → A
new start

D → C → B → A
start

Pointer reversal

A → B → C → D
start

D → C → B → A
end

C → B → A
new end

A → B → C → D
start

D → C → B → A
end

new start