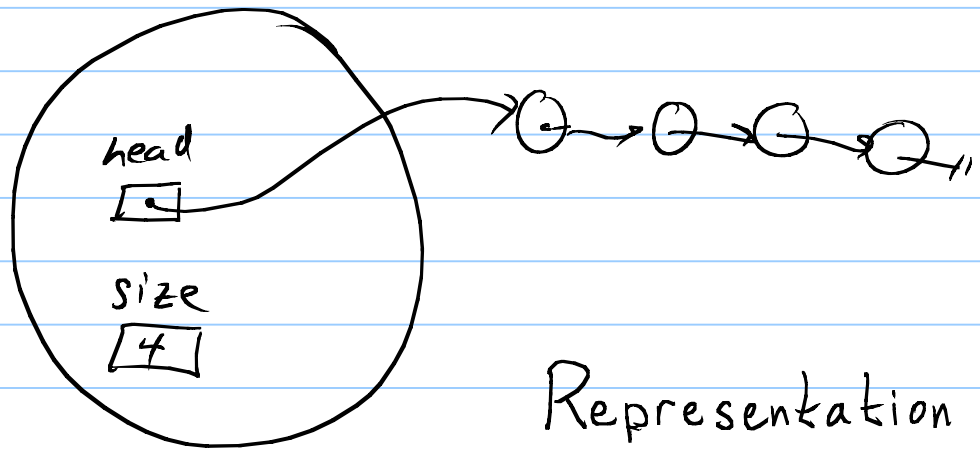
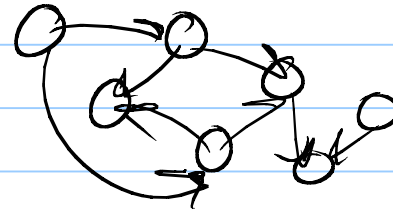
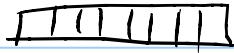


Representation Invariants

Note Title

10/24/2007



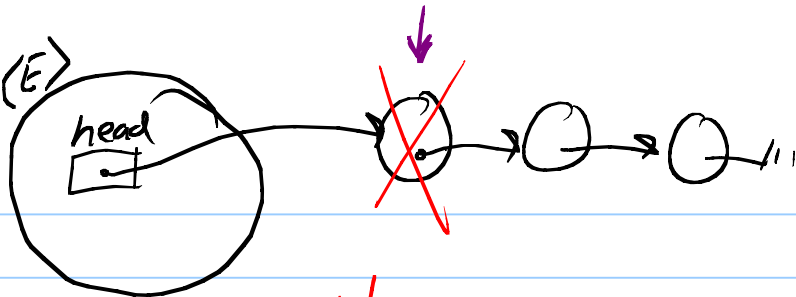
LinkedList

Representation Invariant -

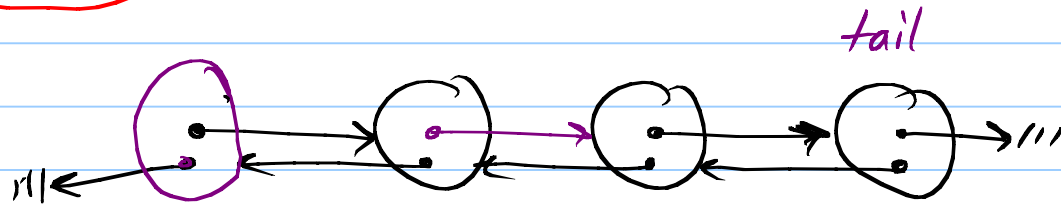
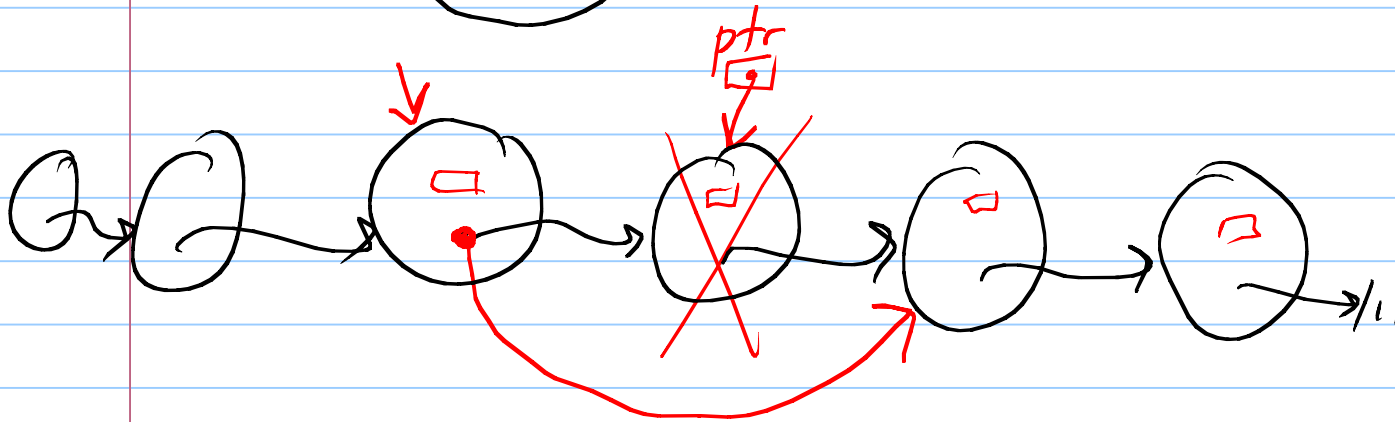
- a property of the internal rep.
- true after the constructor executes
- true after every method executes

"Each method preserves the invariants"

LinkedList(E)

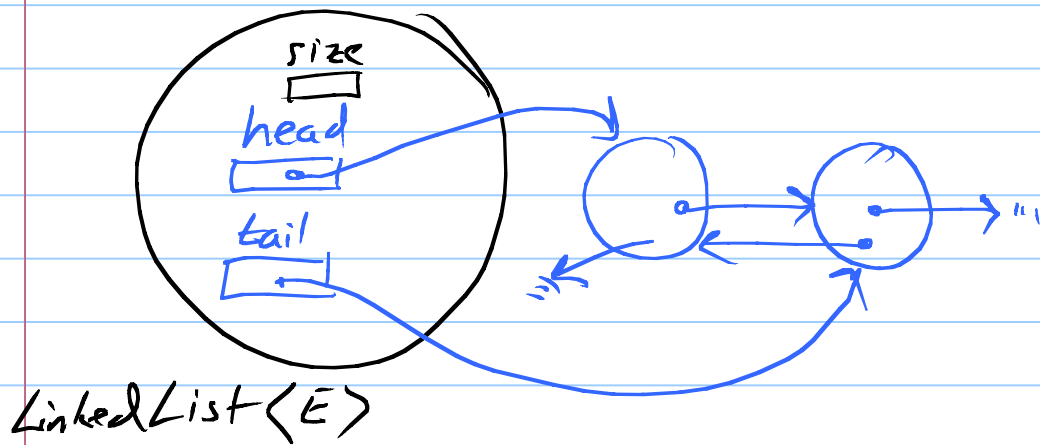
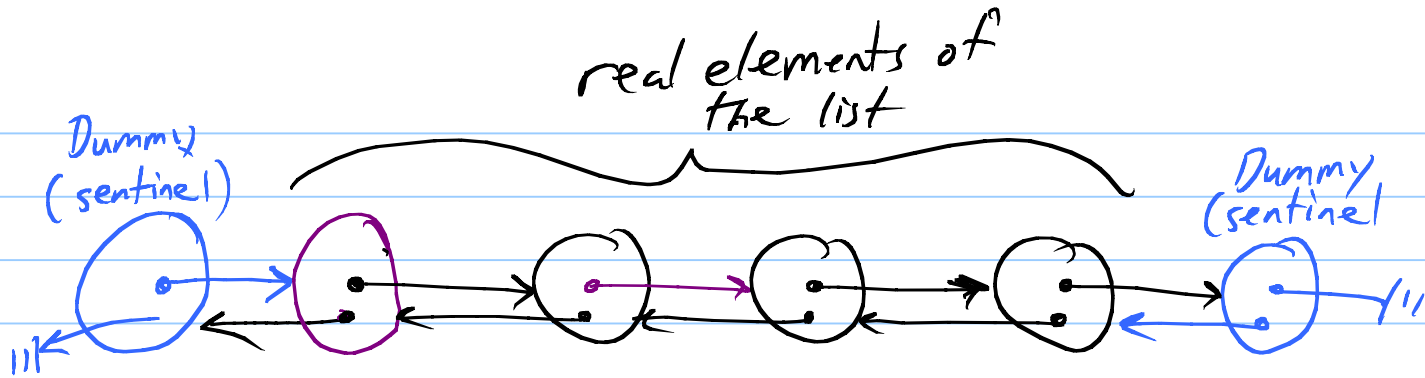


```
class ListItem(E) {
  E value;
  ListItem next;
  ListItem prev;
}
```



for all list items x , $x.next.prev == x$
 except the tail

$x.prev.next == x$
 for all except
 the head



Invariant:

- For all non-sentinels,
 - $\rightarrow x.next.prev == x$
 - $\leftarrow x.prev.next == x$
- $size == \# \text{ of non-sentinels}$

```

boolean checkRep() {
    check invariants
}

```

assert statement

if (DEBUG)

____; ; ;

assert checkRep();



X java -assertionsenabled

