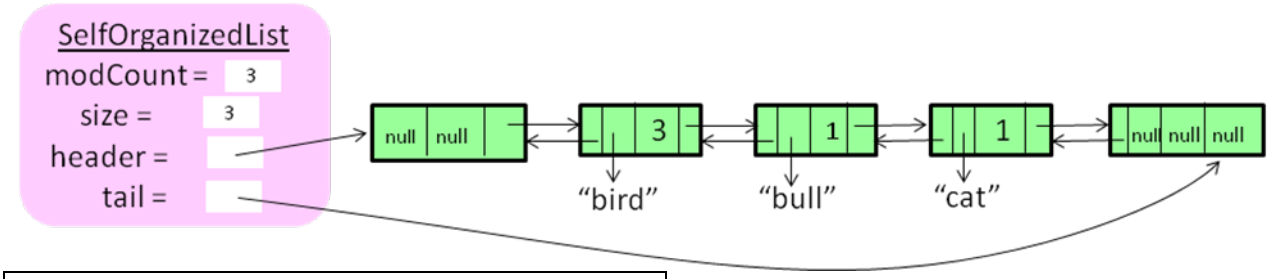
แบบฝึกปฏิบัติการครั้งที่ 4

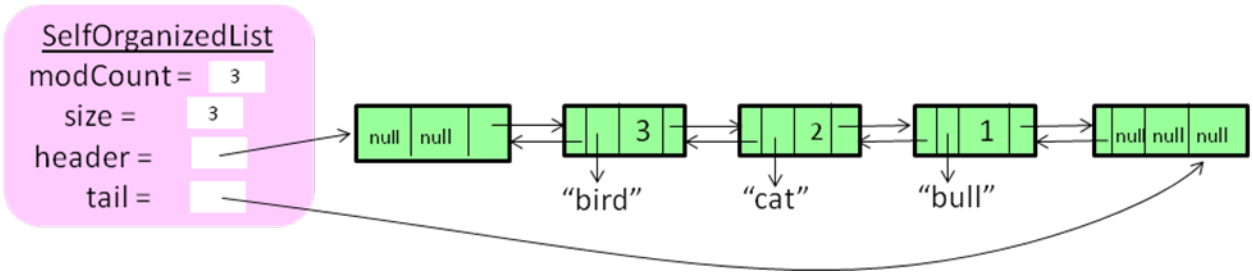
As we have learned SelfOrganizedList in class using Move-to-Front approach, write a SelfOrganizedList class but use “Count Method” to organize list. Count Method is ordering the list by the number of times elements are being accessed. For example, if we have the following list




```
List l = new SelfOrganizedList();

l.contains("cat");
```

If we search for “cat”, our list should become



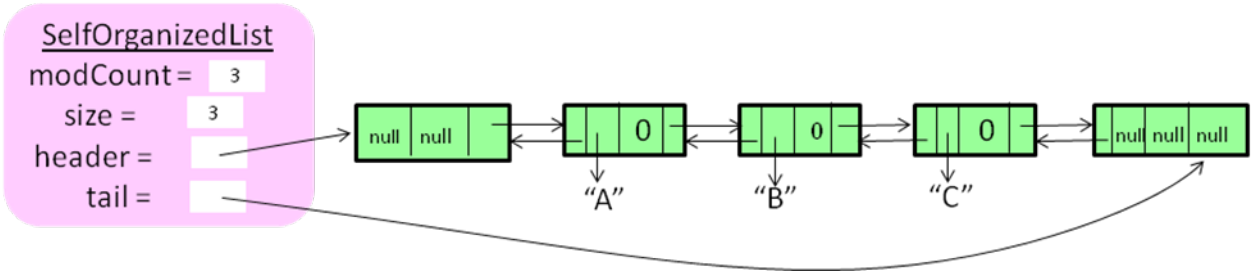
Therefore, based on `DoublyLinkedList` class that we have learned, you only need to modify `LinkedNode` class and “`contains`” method.

```
public boolean contains(Object e);
```

Next, write a method to reverse a list. Do not create a new list.

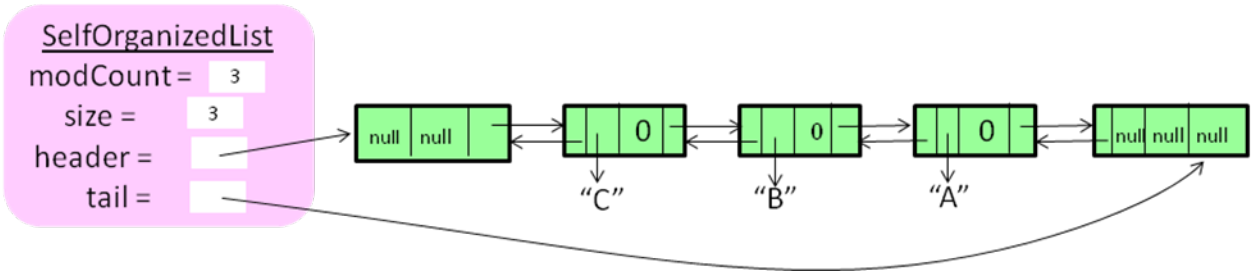
```
public void reverse();
```

For example, if a list is



```
l.reverse();
```

Calling the `reverse` method, our list should become



Use the following code to verify your methods

```
    public static void main(String[] args) {
        List l = new SelfOrganizedList();
        l.add("A");
        l.add("B");
        l.add("C");
        l.add("D");
        l.add("E");
        l.add("F");
        l.printElement();
        l.reverse();
        l.printElement();
        l.contains("C");
        l.contains("D");
        l.contains("C");
        l.contains("C");
        l.contains("A");
        l.contains("A");
        l.contains("D");
        l.printElement();
    }
```

Results

```
A(0) B(0) C(0) D(0) E(0) F(0)

F(0) E(0) D(0) C(0) B(0) A(0)

C(3) D(2) A(2) F(0) E(0) B(0)
```