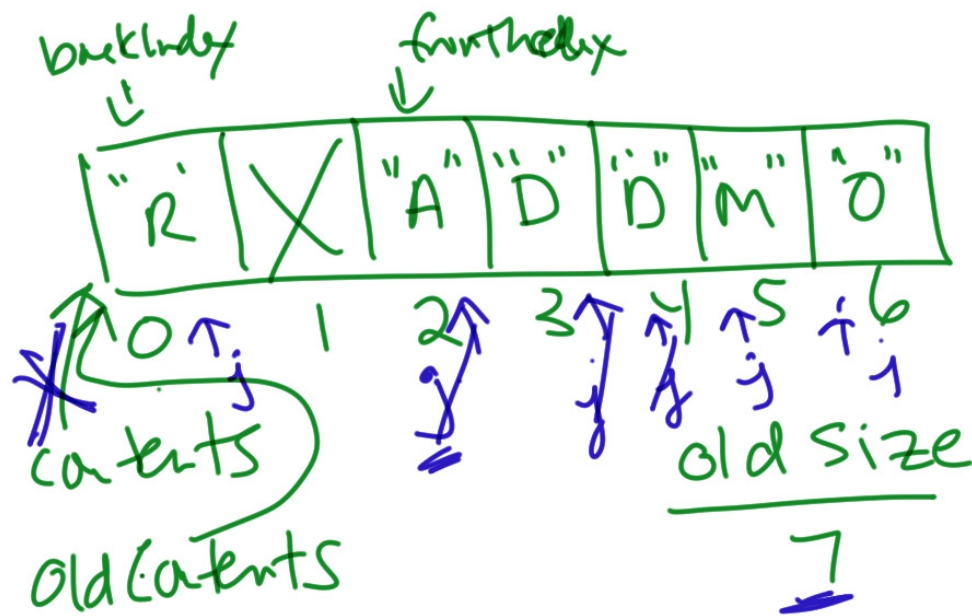0 1 2 3 4 5 6

0 1 2 3 4 5 6

0 1 2 3 4 5 6 7 8 · · ·

```java
@SuppressWarnings("unchecked")
private void ensureCapacity() {
    if ((backIndex + 2) % contents.length == frontIndex) {
        T[] oldContents = contents;
        int oldSize = oldContents.length;
        int newSize = 2 * oldSize;
        contents = (T[]) new Object[newSize];

        int j = frontIndex; //count through old contents
        for(int i = 0; i < oldSize - 1; i++) {
            contents[i] = oldContents[j];
            j = (j+1) % oldSize;
        }

        //reset field variables for updated contents array
        frontIndex = 0;
        backIndex = oldSize - 2;

    }
}
```

backIndex

frontIndex

"R"	X	"A"	"D"	"D"	"M"	"O"
0	1	2	3	4	5	6

contents

old Contents

$(0+2)\%7 == 2$ ✓

FULL

$$\frac{old\ Size}{7}$$

$$\frac{newSize}{14}$$

contents

"A"	"D"	"D"	"M"	"O"	"K"								
0	1	2	3	4	5	6	7	8	9	10	11	12	13

frontIndex

backIndex