

```

1 public abstract class Table {
2
3     private int cursor;
4     private int N;
5     private Object[] array;
6
7     public Table(){
8         this.cursor = 0;
9         this.N = 1;
10        this.array = new Object[this.N];
11    }
12
13    public Object get(int i){
14        if (i<this.cursor) return this.array[i];
15        else throw new IndexOutOfBoundsException();
16    }
17
18    public void set(int i, Object o){
19        if (i<this.cursor) this.array[i] = o;
20    }
21
22    public void clear(){
23        this.cursor = 0;
24        this.N = 1;
25        this.array = new Object[this.N];
26    }
27
28    public void add(Object o){
29        if (this.cursor==this.N){
30            this.N = this.extendTo(this.N);
31            Object[] a = new Object[this.N];
32            for (int i=0;i<this.cursor;i++){
33                a[i] = this.array[i];
34            }
35            this.array = a;
36        }
37        this.array[this.cursor] = o;
38        this.cursor++;
39    }
40
41    public abstract int extendTo(int i);
42 }

```