

```
1  import java.util.*;
2  /**
3   * the basic program for Array and ArrayList
4   */
5  public class BasicArrList
6  {
7      /**
8       * reverse
9       */
10     public static void reverseArr(int[] arr)
11     {
12         for(int i=0;i<arr.length/2;i++){
13             int temp=arr[i];
14             arr[i]=arr[arr.length-1-i];
15             arr[arr.length-1-i]=temp;
16         }
17     }
18
19     public static void reverseArrList(ArrayList<Integer> al)
20     {
21         for(int i=0;i<al.size();i++){
22             al.add(0,al.remove(i));
23         }
24         for(int i=al.size()-1;i>=0;i--){
25             al.add(al.remove(i));
26         }
27     }
28
29     /**
30      * In square change major diagnol to 1
31      * minor diagol to -1 ,middle to 0
32      */
33     public void diagonals(int[][] arr)
34     {
35         int size=(int) (Math.min(arr.length,arr[0].length));
36         for(int r=0;r<arr.length;r++){
37             for(int c=0;c<arr[0].length;c++){
38                 if(r==c && r+c==size-1){
39                     arr[r][c]=0;
40                 }else if(r==c){
41                     arr[r][c]=1;
42                 }else if(r+c==size-1){
43                     arr[r][c]=-1;
44                 }
45             }
46         }
47     }
48
49
50
51
52
53
```

```
54
55     /**
56     * print 2D array with line number
57     * multi variables control
58     */
59     public void print(int[][] arr)
60     {
61         int lineNum=1;
62         for(int r=0;r<arr.length;r++){
63             System.out.print(lineNum+" "); //line start
64             for(int c=0;c<arr[0].length;c++){
65                 System.out.print(arr[r][c]+" ");
66             }
67             System.out.println(); //line end
68             lineNum++;
69         }
70     }
71
72 }
73
```