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1
2 /**
3  * HandShake, Exchange gifts, (握手和互赠)
4  * Single round robin, double round robin(单双循环赛)
5  * diagonls, internal triangles of polygon (多边形对角线个数和内三角形个数)
6  * (1)pair(2)arbitrary
7  */
8 public class SummaryHandShake
9 { /**
10     * HandShake
11     */
12     public static int handShake(int[] a) {
13         int count=0;
14         for(int i=0;i<a.length;i++) {
15             for( int j=i+1;j<a.length;j++) {
16                 count++;
17             }
18         }
19         return count;
20     }
21
22     /**
23     * Exchange gifts
24     */
25     public static int exchGifts(int[] a) {
26         int count=0;
27         for(int i=0;i<a.length;i++) {
28             for(int j=0;j<a.length;j++) {
29                 if(i!=j) {
30                     count++;
31                 }
32             }
33         }
34         return count;
35     }
36
37     /**
38     * diagonls
39     */
40     public static int diagonls(int[] a)
41     {int count=0;
42         for(int i=0;i<a.length;i++) {
43             for(int j=0;j<a.length;j++) {
44                 int before=i-1;
45                 int after=i+1;
46                 if(i==0) {
47                     before=a.length-1;
48                 }
49                 if(i==a.length-1) {
50                     after=0;
51                 }
52                 if(j!=i&&j!=before&&j!=after) {
53                     count++;
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54         }
55     }
56 }
57     return count;
58 }
59
60 /**
61  * internal triangles
62  */
63 public static int interTri(int[] a)
64 {int count=0;
65     for(int i=0;i<a.length;i++){
66         for(int j=0;j<a.length;j++){
67             int after=i+1;
68             if(i==a.length-1){
69                 after=0;
70             }
71             if(j!=i&&j!=after){
72                 count++;
73             }
74         }
75     }
76     return count;
77 }
78
79 }
```