

Kiwi Farm

Contact
sdtran5@uh.edu

Description

You are a kiwi farmer that lives on your own kiwis. Kiwis are all that you eat. If you want to not die, you have to harvest and replant your kiwis.

Let's say your kiwi farm is represented by a matrix:

4	6	8	9	Each number represents the "ripeness" of a kiwi with 0 meaning that it has just been planted and 6-8 meaning that it is at optimal ripeness.
0	0	1	0	
7	7	5	6	
2	1	7	7	

If the ripeness exceeds 8, then the fruit is considered rotten and inedible.

As each day passes, you will check every row of your kiwi farm to see if the row can be harvested. You can consider this by checking if at least 50% of a row's kiwis are at least ripe (at least 6). If it is, the number of ripe and rotten kiwis will be tallied and the entire row will be cleared and replanted. Therefore the kiwis that aren't fully grown will be discarded. Although you are a wasteful farmer, you probably don't want your first homework to be any harder.

At the end of the day any unharvested rows will age by one day (incremented by 1).

You will simulate your kiwi patch for seven days using the provided procedure above. At the end of the seventh day, all rows will once again be checked harvest and tallied. Then present your yield. Your yield (or output) will be the resulting matrix, then the number of harvested kiwis and rotten kiwis.

Hints

- The kiwi matrix will always be a square and the size will always be even (so calculating 50% will be easier)
- The input will always start with the size of the matrix
- You are required to use pointers to solve the problem
- On the first iteration, the kiwis will be incremented before they are checked

Input

```
4
4 6 8 9
0 0 1 0
7 7 5 6
2 1 7 7
```

Output

```
./kiwi input=input1.txt
output=output1.txt
0 0 0 0
0 0 0 0
0 0 0 0
0 0 0 0
```

```
Harvested kiwis: 23
Rotten kiwis: 1
```

```
6
9 9 9 9 9 9
9 9 9 9 9 9
9 9 9 9 9 9
9 9 9 9 9 9
9 9 9 9 9 9
9 9 9 9 9 9
```

```
./kiwi input=input2.txt
output=output2.txt
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
```

```
Harvested kiwis: 36
Rotten kiwis: 36
```

```
2
12 11
1 0
```

```
./kiwi input=input3.txt
output=output3.txt
0 0
1 1
```

```
Harvested kiwis: 3
Rotten kiwis: 2
```

