**Spiral**

Q 1Spiraling 2-D array**.** Given a 2-D array, write a program Spiral.java to print it out in spiral order.

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| --- |
| Testcase    Input  4 4  1  2  3  4  5  6  7  8  9 10 11 12  13 14 15 16    Output  1 2 3 4 8 12 16 15 14 13 9 5 6 7 11 10 |

Q 2                                                  **2D Array - Rotate Matrix by 90 Degree**

You are given an n x n 2D matrix representing an image. Rotate the image by 90 degrees (clockwise).

Input Format

 On first line you need to tell that how many rows and columns your matrix need to have and these values should be separated by space. Then after that, each line will represent will represent each row and you need to enter numbers which each rows should have separated by a space.

Testcase

 4 4   
1  2  3  4

5  6  7  8

9 10 11 12

13 14 15 16

Output

13 9 5 1

14 10 6 2

15 11 7 3

16 12 8 4

**Q 3.                                                          Find Biggest Difference**

You will be given an array and you need to find the biggest difference between any two numbers present in the array.

Input Format

You will be taking a number as an input stdin which tells about the length of the array. On another line, array elements should be there with single space between them.

Constraints

1 <= L <= 1000

1 <= Ai <= 1000

Output Format

You need to print the biggest difference between any two numbers present in the array.

Note - The length of the array should not be less than 2.

TestCase

Input

7

29 79 72 81 9 7 21

Output

74

**Leader**

Q 4. Write a program to print all the LEADERS in the array. An element is leader if it is greater than all the elements to its right side. And the rightmost element is always a leader. For example int the array {16, 17, 4, 3, 5, 2}, leaders are 17, 5 and 2.

Input Format

You will take an integer as input from STDIN which represent the length of the array and on another line array elements will be there separated by single space.

Constraints

1 <= L <= 1000

1 <= Ai <= 1000

Output Format

print the numbers one on each line to the STDOUT.

TestCase1

Input

6

16 17 4 3 5 2

Output

17