Printing triangle

Given integer **n** print such a triangle:

```
.
.
.
7
4 8       n-1
2 5 9        n
1 3 6 10 ...
```

Input

In the first and the only line there is an integer **n** (n<1001).

Output

As above.

Example

Input:
17
Output:
16
11 17
7 12
4 8 13
2 5 9 14
1 3 6 10 15