Consider this program (whose inclusions have been removed):

```c
void print(int n) {
    if (n > 0) {
        print(n - 1);
        cout << ' ' << n;
        print(n - 1);
    }
}

int main() {
    int n;
    while (cin >> n) {
        print(n);
        cout << endl;
    }
}
```

Take a look at the sample input and sample output to see what this program prints for every given number.

Without modifying the `main()`, reimplement the procedure `print(n)` with no calls at all, recursive or not, so that the output of the program does not change.

**Input**

Input consists of several strictly positive natural numbers.

**Output**

For every number, print a line identical to the one written by the program above.

**Observation**

To solve this exercise, the only containers that you should use are stacks.

**Sample input**

<table>
<thead>
<tr>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

**Sample output**

<table>
<thead>
<tr>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>1 2 1</td>
</tr>
<tr>
<td>1 2 1 3 1 2 1</td>
</tr>
<tr>
<td>1 2 1 3 1 2 1 4 1 2 1 3 1 2 1</td>
</tr>
</tbody>
</table>

**Problem information**

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