# Problem C: The 3-Regular Graph
**Input: standard input**
**Output: standard output**

The degree of a vertex in a graph is the number of edges adjacent to the vertex. A graph is 3-regular if all of its vertices have degree 3. Given an integer **n**, you are to build a simple undirected 3-regular graph with **n** vertices. If there are multiple solutions, any one will do.

## Input
For each test case, the input will be a single integer **n** as described above. End of input will be denoted by a case where **n** = 0. This case should not be processed.

## Output
If it is possible to build a simple undirected 3-regular graph with **n** vertices, print a line with an integer **e** which is the number of edges in your graph. Each of the following **e** lines describes an edge of the graph. An edge description contains two integers **a** & **b**, the two endpoints of the edge. Note that the vertices are indexed from **1** to **n.** If it is not possible to build a simple undirected 3-regular graph with **n** vertices, print **Impossible** in a single line.

## Constraints
- $1 \le n \le 100$

| Sample Input | Output for Sample Input |
|---|---|
| 4<br>3<br>0 | 6<br>1 2<br>1 3<br>1 4<br>2 3<br>2 4<br>3 4<br>Impossible |

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