**PROBLEMS**

1. **Min n Max**
2. **Stop the explosion.**
3. **Long Sequence**

**Min n Max:**

Raji is python lecturer. Ram and Tarun are her students and they have asked the solution of a question they have encountered in CODE3000. Help Raji to get the solution of the question.

**Question:**

A list is given, and we must find the alternate min and max of the list by using a special method. The method is, we must find the first minimum number index and then the maximum number index of right most list from the previous index and then minimum number index of the left most list from the previous index and so on until all the **SET** of elements are covered. See that no element is repeated.

**Note:**

If all the elements are same or list has only one element it should print 0.

**Input Format:**

Length of the string(n)

n space separated natural numbers.

**Output Format:** The number representing the index of the numbers in list

**Sample Test Cases:**

**Input 1:**

6

5 4 1 9 2 3

**Output:**

231540

**Input 2:**

13

6 3 1 2 3 1 4 5 1 3 5 5 6

**Output:**

2123716

**Stop the explosion**

Sunny and Tarun were kidnapped by the terrorists. The head of the terrorist group had done PhD is the dangerous chemical reactions. So, he decided to kill them using one such a reaction called NI3 bomb. It’s the product of the reaction between Ammonia and Iodine. A small amount of explosion is enough to kill them. So, he made his equipment ready and tied both to a pillar and locked the room. The equipment consists cylinder of some radius and the cylinder has some ammonia in it for certain height. There is a connection between the cylinder and ammonia tank (No-limit) and a motor is sucking the ammonia at a speed of X cubic centimeter per second when touches the iodine solution placed at a height equal to that of cylinder’s results in the reaction. But they have somehow untied themselves and try to stop the reaction. They started removing the Ammonia from the cylinder at some Y cubic centimeter rate. Find the no of seconds rounded to its nearest integer to make the cylinder empty if not print “**Impossible”.**

**Input format:**

Radius of the cylinder (positive integer)

Height of the ammonia (positive integer)

Rate of Ammonia getting into cylinder (positive integer)

Rate of Ammonia removed from cylinder. (positive integer)

**Output format:**

Minimum no of seconds required to stop the reaction.

**Sample Testcase:**

**Input 1:**

1

3

9

2

**Output:** Impossible

**Input 2:**

1

3

2

9

**Output:** 4

**Long Sequence:**

Sunny and Tarun went to china and visited every temple. They came to know about Chinese angel number, language, traditions, recipes, arts, dragons, Kungfu, food etc., They came across a school of math where no of puzzles are carved on the walls. There is one such puzzle called “Long Sequence” where they are not able to crack them. Help them to crack the puzzle.

**Puzzle:**

A number is given as input and we must find the output of it.

The only clue is if input is 1 then output is 1.

**Note:** They are in the China the land of rising sun.

**Input Format:** an integer n

**Constraints:** n<69

**Output Format:** binary number

**Sample Test Cases:**

**Input 1:**

2

**Output:**

110

**Input 2:**

4

**Output:**

110110011100100

Hello 104,

So, it’s been 1 round, 7 challenges, 20 questions and sleepless effort of you that brought you to the second round of the CODE3000. And now it is called as **CODE3000-2.0**.

I welcome you all to this round 2 which has 5 challenges in the coming 5 weeks and submission of the code and getting cutoff marks for at least 3 challenges is must and should for proceeding to the further rounds.

This is our 1st challenge of the round 2 and the link is provided below.

Hacker rank link: [www.hackerrank.com/code3000-2-0](https://www.hackerrank.com/code3000-2-0)

Please do not share this link with those who are not qualified.

Think Hard, Code Smart.

Thank You.