Telerik Academy Alpha 2017-2018 - C# Entry Exam

Task 2 - Prime Triangle

We know that you love math, so we have prepared a very interesting task, that involves both geometry and prime numbers.

By a given **N** number, from which you need to generate a sequence of **1 to N** inclusive. For every prime number in that sequence, you need to print out all the other numbers before it (and the number itself), wether they are prime or not.

- For example, you are given **10** as the number **N**. Meaning that we have the sequence **1, 2, 3, 4, 5, 6, 7, 8, 9, 10**.
- The prime numbers in this sequence are **1, 2, 3, 5, 7**. Following this we have **5 prime numbers** and we need to **print 5 rows**.
- Each row contains all the numbers **from 1 to the current prime number**.
- Following the algorithm, we get this result: (each bolded number is prime)

1

1 2

1 2 3

1 2 3 4 **5**

1 2 3 4 **5** 6 **7**

To make things more simple, we don't want to just print out the numbers. We want to print out **0** if the number is not prime, or **1** if the number is prime. So, we get this:

1

1 1

1 1 1

1 1 1 0 **1**

1 1 1 0 **1** 0 **1**

Input

- The input data consists of single line holding an integer number: **N**.
- The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

- The output should consist of several lines of digits **without any space between them**, each of which can be either **1** or **0**

Constraints

- The number **N** will be in the range [1..500] inclusive.

Examples

Input	Output	Input	Output
10	1 11 111 11101 1110101	27	1 11 111 11101 1110101 11101010001 1110101000101 11101010001010001 1110101000101000101 11101010001010001010001