## Sieve of Sundaram

In this problem you must implement Sieve of Sundaram, other solutions (algorithms) not acceptable.

Given one integer $n$, write prime numbers not greater than $n$ in ascending order.

## Input

One integer number2 $\leq n \leq 100000$.

## Output

Print space separated prime numbers not greater than $n$ in one line.

## Example

Input:
7
Output:
2357
23/06/2019 - Time limit increased.

