Que1. Given a number **N**, calculate the prime numbers up to N using Sieve of Eratosthenes.

Example 1:

Input:

N = 10

Output:

2 3 5 7

Explanation:

Prime numbers less than equal to N

are 2 3 5 and 7.

Example 2:

Input:

N = 35

Output:

2 3 5 7 11 13 17 19 23 29 31

Explanation:

Prime numbers less than equal to 35 are

2 3 5 7 11 13 17 19 23 29 and 31.

Que2. Given a number n, print all primes smaller than n. For example, if the given number is 10, output 2, 3, 5, 7.

A Naive approach is to run a loop from 0 to n-1 and check each number for primeness. A Better Approach is to use Simple sieve of Eratosthenes.

Que3. **How to compute Φ(n) for an input n?**

Suggestion-
A **simple solution** is to iterate through all numbers from 1 to n-1 and count numbers with gcd with n as 1. Below is the implementation of the simple method to compute Euler's Totient function for an input integer n.