Logo

# STUDENT REPORT

## DETAILS

**Name**

BALAJI NAGA V N

**Roll Number**

3BR23EC022

## EXPERIMENT

**Title**

MATHS TEST

**Description**

Alice has a mathematics test for which she is underprepared. She has to do at least one question correctly to pass the test. He decides to do a question which needs her to find the smallest prime number which is larger than a given integer N. Your task is to find and return an integer value representing the smallest prime number larger than N.

**Input Format**:

**input1:** An integer value N

**Output Format:**

Return an integer value representing the smallest prime number larger than N.

**Sample Input**

6

**Sample Output**

7

**Source Code:**

```python
import math

def is_prime(num):
    if num <= 1:
        return False
    if num == 2:
        return True
    if num % 2 == 0:
        return False
    for i in range(3, int(math.sqrt(num)) + 1, 2):
        if num % i == 0:
            return False
    return True

def next_prime(N):
    candidate = N + 1
    while True:
        if is_prime(candidate):
            return candidate
        candidate += 1

# Input reading
N = int(input())
result = next_prime(N)
print(result)
```

## RESULT

5 / 5 Test Cases Passed | 100 %