

Program 2. WAP to accept a number 'n' to compute the following:

a. Check if 'n' is prime or not.

```
Code =
n = eval(input("enter value "))
if n>1:
    for i in range(2,n):
        if n % i == 0:
            print(n,"not a prime number ")
            break
    else:
        print(n,"prime number")
else:
    print(n,"not a prime number ")
```

```
Output =
enter value 1
1 not a prime number
enter value 29
29 prime number
```

b. Generate all prime numbers till 'n'

```
Code =
n = eval(input("enter value "))
for num in range(1,n):
    if num > 1:
        for i in range (2,num):
            if num % i == 0:
                break
        else:
            print(num,end = ',')
```

```
Output =
enter value 100
2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,73,79,83,89,97,
```

c. Generate first 'n' prime numbers

```
Code =
n = eval(input("enter value "))
count = 0
number = 2
while count < n:
    for i in range(2,number):
        if number % i == 0:
            number += 1
            break
    else:
        print(number,end=',')
        count += 1
        number += 1
```

```
Output =
enter value 20
2,3,5,7,11,13,17,19,23,29,31,37,41,43,47,53,59,61,67,71,
```

d. Calculate sum of first 'n' natural numbers

```
Code =
n = eval(input("enter value "))
sum = 0
for i in range(1,n+1):
    sum += i
print(sum)
```

```
Output =
enter value 50
1275
```