Department of Computer Science and Engineering

SUBJECT PROJECT

of

IT3008 - Programming with Python

is submitted to

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Assistant Professor

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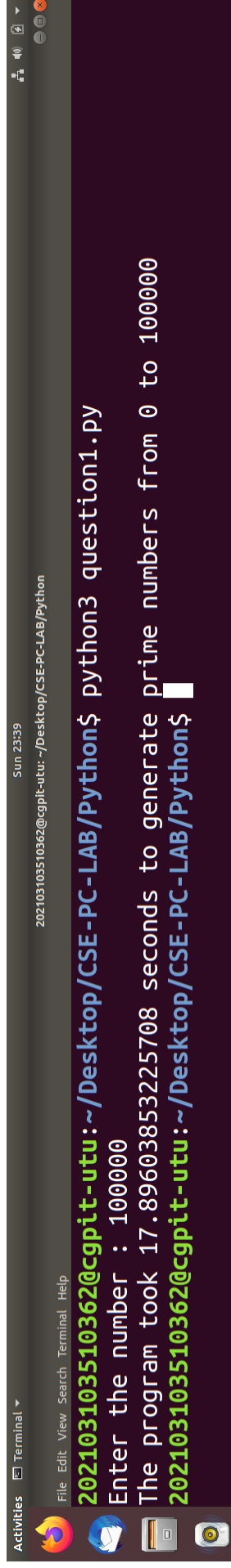
Uka Tarsadia University, Maliba Campus Bardoli, Gujarat

Semester – 2

(Summer 2022)

Question 1

Develop a prime number generator function primeNator(). Ask the user for the input of the largest number, up to which user wants to generate prime numbers. Design program is such a way that gives total execution time for generation of prime numbers.

```python
# B.Tech Computer Science and Engineering
# Saurabh Yadav
# 202103103510362


# importing time module
import time

def primeNator(range_number):
    init_time = time.time()
    prime_lst = []
    for num in range(2,range_number+1):
        if num > 1:
            for i in range(2,num):
                if (num%i) == 0:
                    break
            else:
                prime_lst.append(num)
    final_time = time.time()
    return (final_time - init_time),prime_lst

while True:
    try:
        try:
            range_number = int(input("Enter the number : "))
            break
        except Exception:
            print("Please enter number only.")
    except KeyboardInterrupt:
        print("Enter the number and then enter.")

prog_execution_time,prime_numbers = primeNator(range_number)
print(f"The program took {prog_execution_time} seconds to generate prime numbers from
0 to {range_number}")
```

File Edit View Search Terminal Help

20210310351O362@cgpit-utu:~/Desktop/CSE-PC-LAB/Python$ python3 question1.py
Enter the number : 100000
The program took 17.896038532225708 seconds to generate prime numbers from 0 to 100000
20210310351O362@cgpit-utu:~/Desktop/CSE-PC-LAB/Python$