Question.1 Write a program to take input from user and print the table of given number
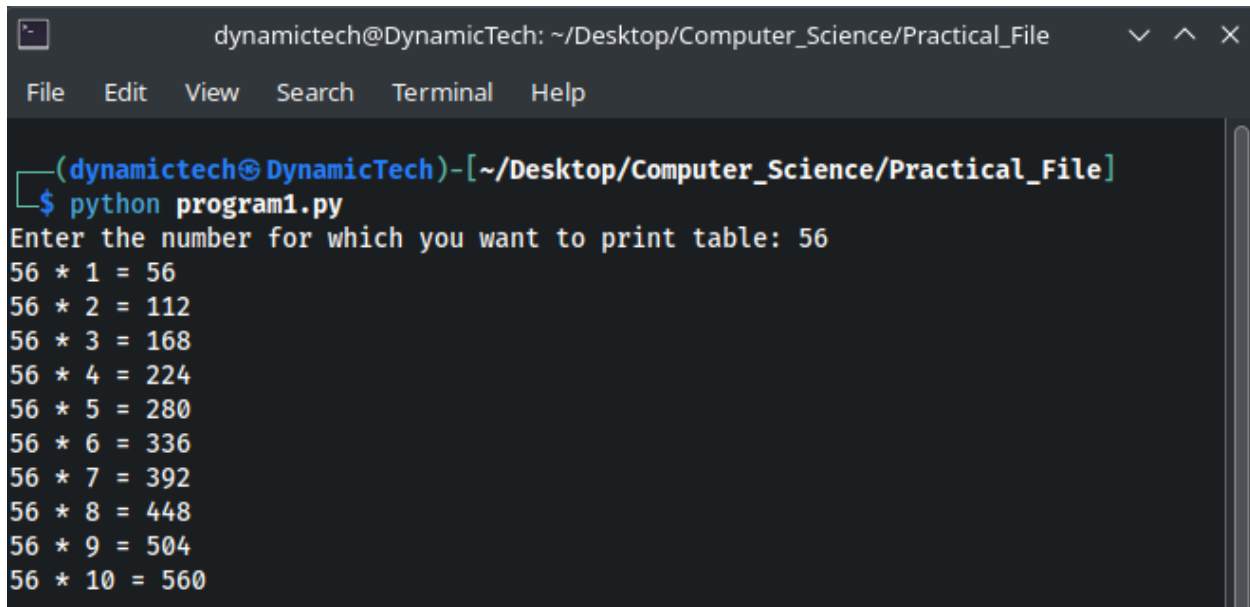
```python
#Program to take input a number from user and print it's table

num = int(input("Enter the number for which you want to print table: "))

for i in range(1, 11, 1): # loop which gives values from 1 to 10

    print(num , "*", i, "=", num*i) # print the table
```

Output:

Question2. Write a program to take two number as input and print the larger and smaller number

Program to take two number as input from user and print the greater and smaller number among both.

num1 = int(input("Enter the first number: "))

num2 = int(input("Enter the second number: "))

if num1 < num2:

  print("Smallest number:->", num1)

  print("Largest number:->", num2)

else:

  print("Smallest number:->", num2)
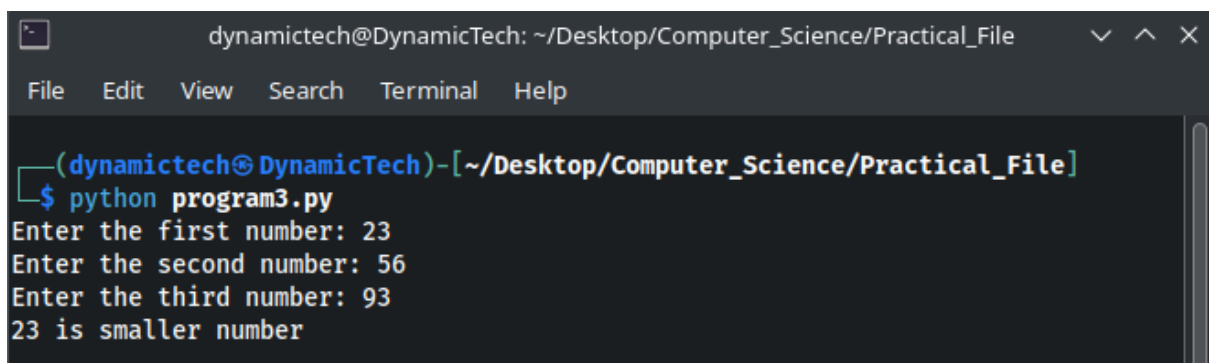
  print("Largest number:->", num1)

Output:

```
dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File     ∨ ∧ ✕

File   Edit   View   Search   Terminal   Help

┌──(dynamictech⊛ DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└$ python program2.py
Enter the first number: 36
Enter the second number: 99
Smallest number:-> 36
Largest number:-> 99
```

Question.3 Write a program to take 3 numbers as input and print the largest and smallest numbers

Program to take 3 number as input from user and print the smaller and largest number

```python
n1 = int(input("Enter the first number: "))

n2 = int(input("Enter the second number: "))

n3 = int(input("Enter the third number: "))


if n1 < n2 and n1 < n3:

    print(n1, "is smaller number")

elif n2 < n1 and n2 < n3:

    print(n2, "is smaller number")

else:

    print(n3, "is smaller number")
```

Output:

Question.4 Write a program to print the value of following series

$1+X+X^2+X^3+X^4+ \ldots\ldots\ldots\ldots\ldots\ldots X^n$

Write a program to print the following series

```python
n = int(input("Enter the value of n: "))

x = int(input("Enter the value of x: "))

a = 1

s = 0

for b in range(1, n+1, 1):

        s = s + x**b

print(1 + s)
```
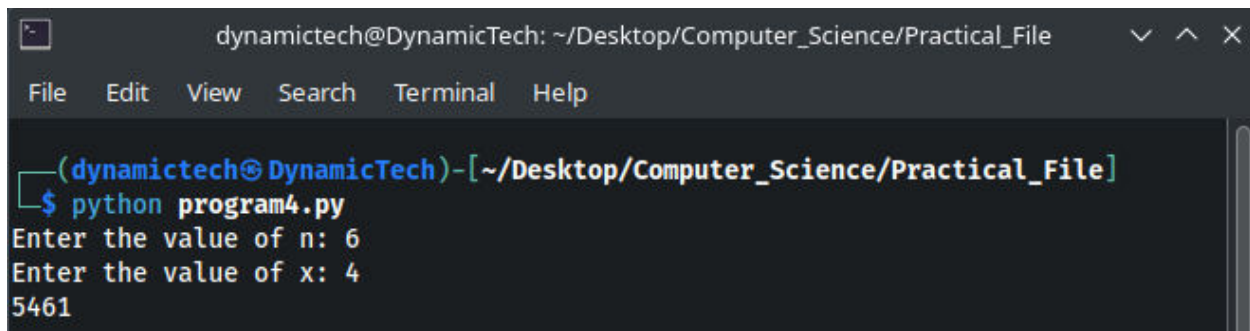
Output:

Question.5 Write a program to print value following series

1-X+X^2-X^3+X^4....................X^n

```python
# Write a program to print following series
n = int(input("Enter the value of n: "))
x = int(input("Enter the value of x: "))
sign = -1
s = 0
for i in range(1, n+1, 1):
        if i%2 == 0:
                s = s + (x**i)*sign
        else:
                s = s + (x**i)
print(1 - s)
```
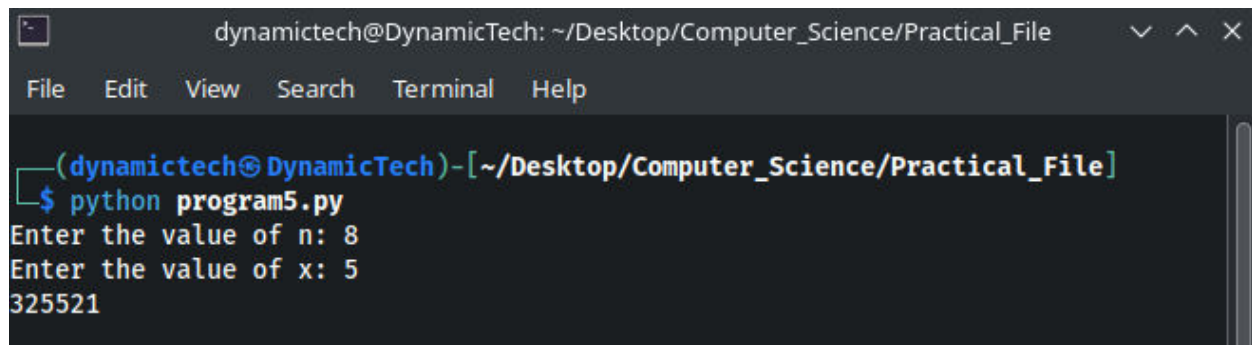
Output:

Question.6 Print following series

X-2/X + 3/X - 4/X + ...n/X

```python
# Write a program to print following series
n = int(input("Enter the value of n: "))
x = int(input("Enter the value of x: "))
s = 0
sign = -1
for a in range(2, n+1):
        if (a % 2) == 0:
                s = s + ((a/x)*sign)
        else:
                s = s + (a/x)
print(x + (s))
```
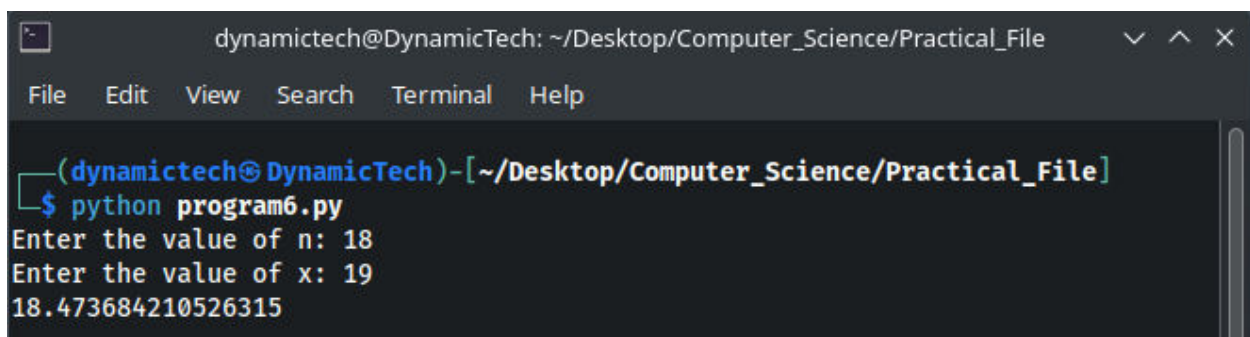
Output:

Question.7 Print following series

$X + X^2/2 - X^3/3 + X^4/4................X^n/n$

```python
# Program to print following series
n = int(input("Enter the value of n: "))
x = int(input("Enter the value of x: "))
s = 1
sign = -1
for a in range(2, n+1, 1):
    if (a % 2) == 0:
        s = s + (x**a)/a
    else:
        s = s + ((x**a)/a)*sign
print(x + (s))
```
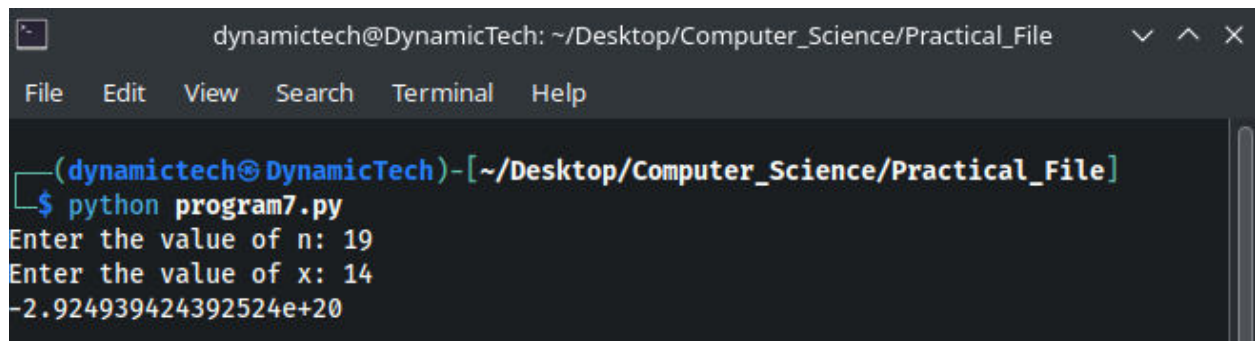
Output:


```
dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File          ∨ ∧ ✕

File   Edit   View   Search   Terminal   Help

┌──(dynamictech⊛DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└─$ python program7.py
Enter the value of n: 19
Enter the value of x: 14
-2.924939424392524e+20
```

Question.8 Write a program to print the sum of digits of entered number

Program to take a number as input from user and print the sum of it's digits

num = int(input("Enter your number: "))

s = 0

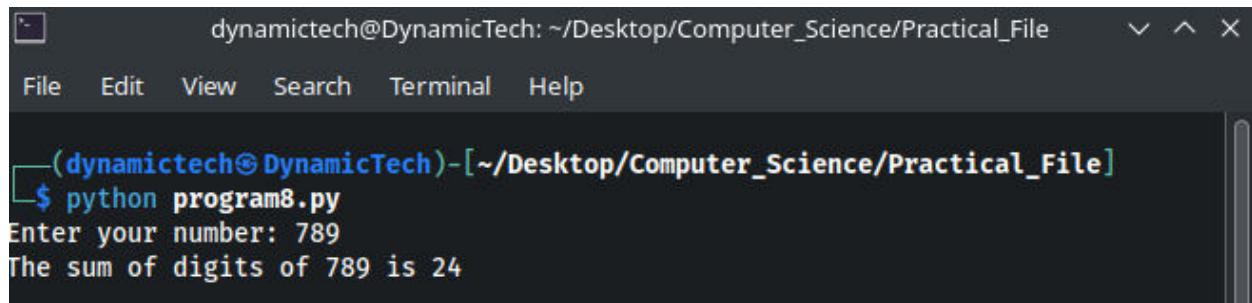for a in str(num):

    a = int(a)

    s = s + a

print("The sum of digits of", num, "is", s)

Output:

```
dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File        ∨ ∧ ✕
File   Edit   View   Search   Terminal   Help

┌─(dynamictech DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└$ python program8.py
Enter your number: 789
The sum of digits of 789 is 24
```

Question.9 Write a program to check whether a entered number is Armstrong or not

```python
# Program to take a number as input from user and check it whether it is
    Armstrong or not

num = int(input("Enter the number to check Armstrong: "))

s = 0

for a in str(num):

        a = int(a)

        s = s + a**(len(str(num)))

if s == num:

        print(num, "is Armstrong")

else:

        print(num, "is not Armstrong")
```
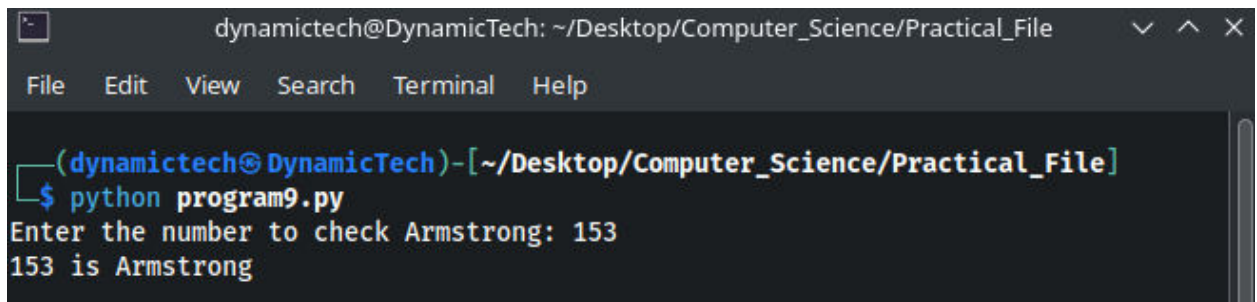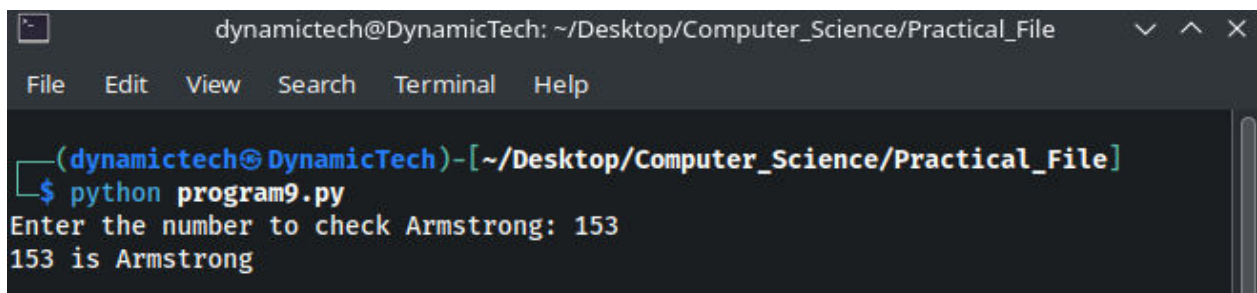
Output:

```
dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File      ∨ ∧ X
File   Edit   View   Search   Terminal   Help

┌─(dynamictech⊕DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└$ python program9.py
Enter the number to check Armstrong: 153
153 is Armstrong
```

```
dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File      ∨ ∧ X
File   Edit   View   Search   Terminal   Help

┌─(dynamictech⊕DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└$ python program9.py
Enter the number to check Armstrong: 153
153 is Armstrong
```

Question.10 Write a program to check whether entered number is Palindrome or not

```python
# Program to take a number as input and check it whether it is Palindrome or not

num = input("Enter the number to check Palindrome: ")

rev_str = num[::-1]

if rev_str == num:

        print(num, "is Palindrome")

else:

        print(num, "is not Palindrome")
```
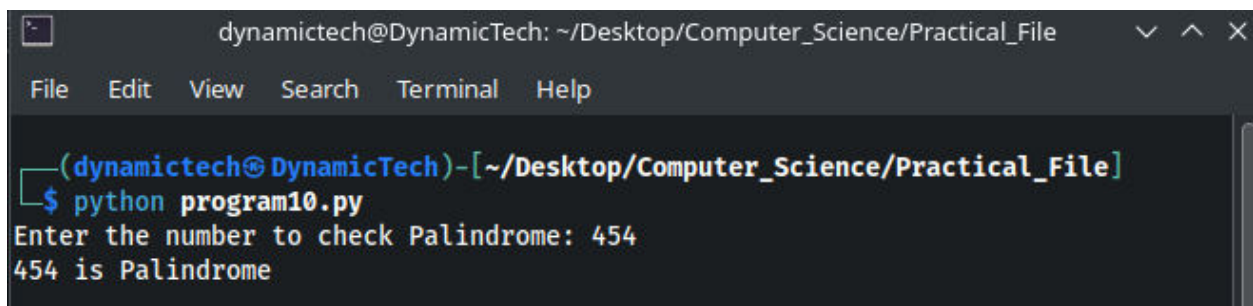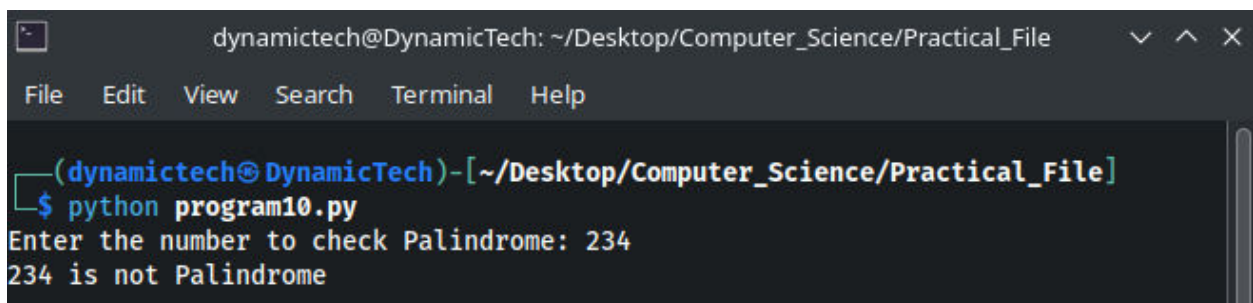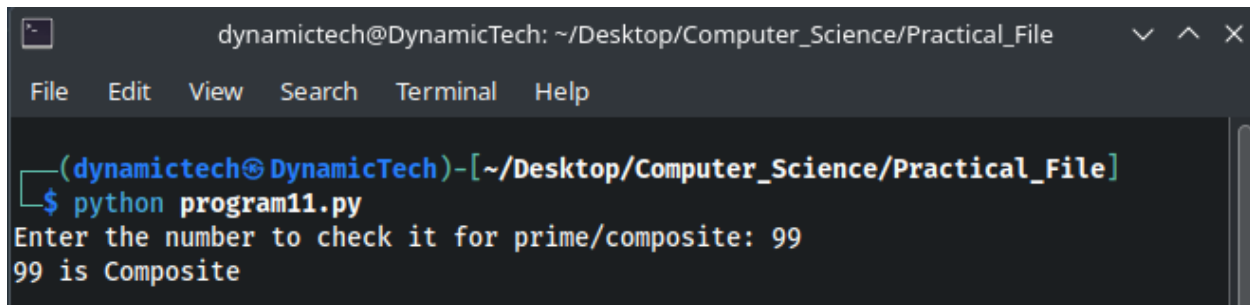
Output:

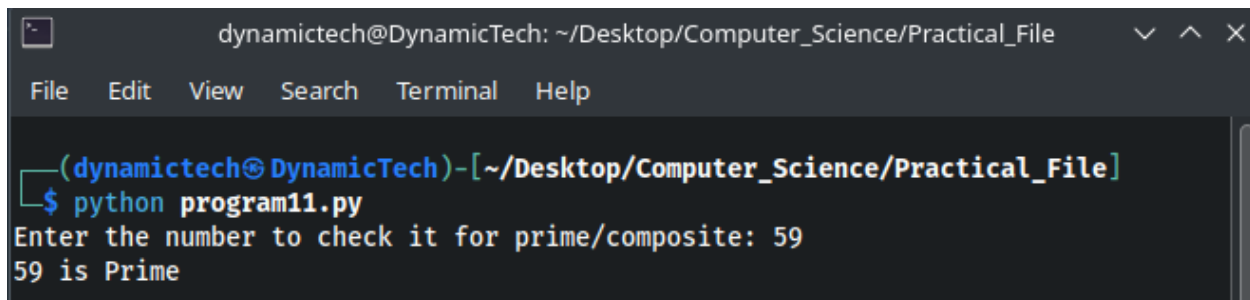## Question.11 Write a program to check entered number is Prime or Composite

```python
# Program to take a number as input from user and check
whether it prime or composite
num = int(input("Enter the number to check it for
prime/composite: "))
cnt = 0
if num > 1:
        for a in range(2, int(num/2), 1):
                if (num % a) == 0:
                        print(num, "is Composite")
                        break
        else:
            print(num, "is Prime")
else:
    print("Error")
```

Output:

dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File

File   Edit   View   Search   Terminal   Help

┌─(dynamictech⊛DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└$ python program11.py
Enter the number to check it for prime/composite: 99
99 is Composite

dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File

File   Edit   View   Search   Terminal   Help

┌─(dynamictech⊛DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
└$ python program11.py
Enter the number to check it for prime/composite: 59
59 is Prime

Question.12 Print the Fabonacci series

0 1 1 2 3 5 8 13 21 34 100

```python
# Program to print Fibonacci series upto 100

# Fibonaccie series-> 0 1 1 2 3 5 8 13 21 34 ----------- 100

a = 0

b = 1

c = 0

print("The Fabonacci series is:")

print(a,b, end=" ")

while c<=100:

        c = a + b

        a = b

        b = c

print(c, end=" ")
```
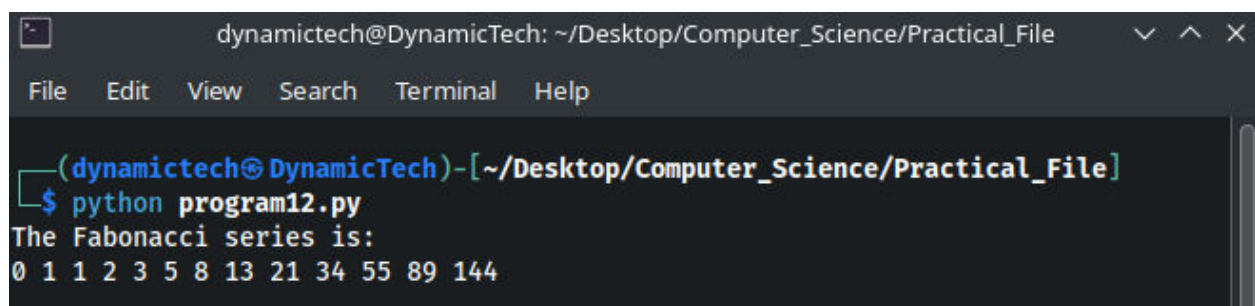
Output:


```
dynamictech@DynamicTech: ~/Desktop/Computer_Science/Practical_File

File   Edit   View   Search   Terminal   Help

(dynamictech DynamicTech)-[~/Desktop/Computer_Science/Practical_File]
$ python program12.py
The Fabonacci series is:
0 1 1 2 3 5 8 13 21 34 55 89 144
```

Question.13 Write a program to print following terms in entered string

1.Vowels 2. Consonents 3. Lowercase 4. Upper

```
# Program to take a string as input from user and print the following terms in
string and count also the occurance of the those terms.

'''

1. Vowels 2. Consonents 3.  Lowercase 4. Uppercase

'''

s = input("Enter the string: ")

vow = "aeiou"

cons = "bcdfghjklmnpqrstvwxyz"

        lc = uc = vow_occ = cons_occ = 0

for i in s:

        for v in vow:

                if i.upper() == v.upper():

        vow_occ += 1

        for c in cons:

                if i.upper() == c.upper():

                        cons_occ += 1

        if i.islower():

                lc += 1

        elif i.isupper():

                uc += 1

print("Vowels:-", vow_occ)
```
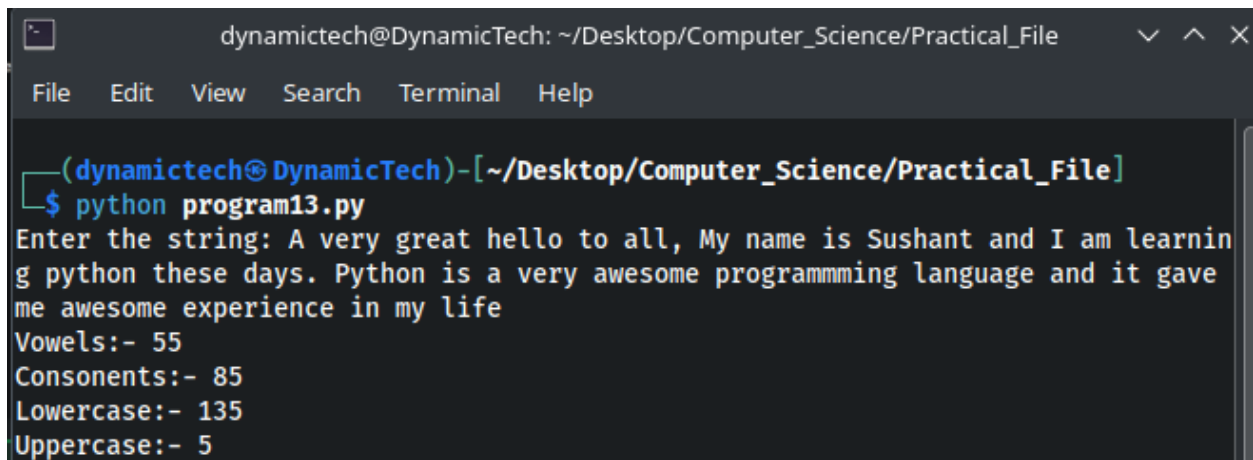
print("Consonents:-", cons_occ)

print("Lowercase:-", lc)

print("Uppercase:-", uc)

Output:

Question.14 Write a program to check whether a entered string is Palindrome or not

Program to take a string as input from user and check whether it is Palindrome or not

```python
st = input("Enter the string to check Palindrome: ")

rev_st = st[::-1]

if rev_st == st:

    print(st, "is Palindrome")

else:

    print(st, "is not Palindrome")
```
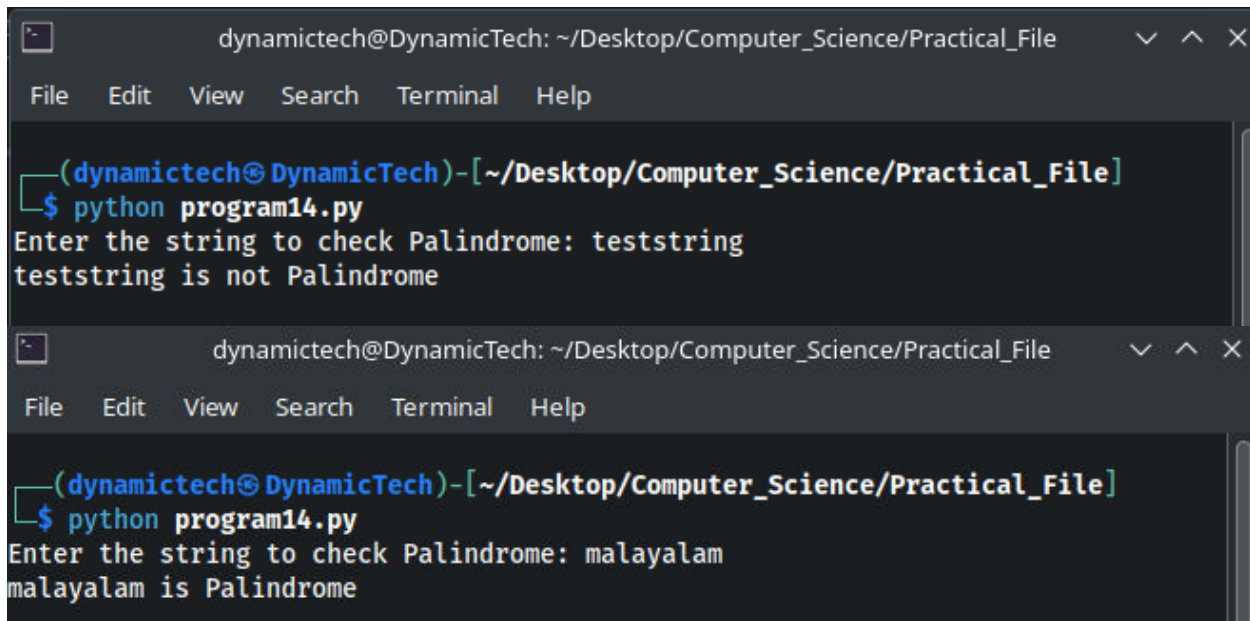
Output:

Question.15 Write a program to convert the case of characters of entered string

```python
# Program to take a string as input from user and convert the case of it's charcaters

st = input("Enter the string: ")

print("The case converted string is", "\' ", end=" ")

for ch in st:

 if ch.isupper():

        ch = ch.lower()

 else:

                ch = ch.upper()

 print(ch, end="")

 print("\' ")
```
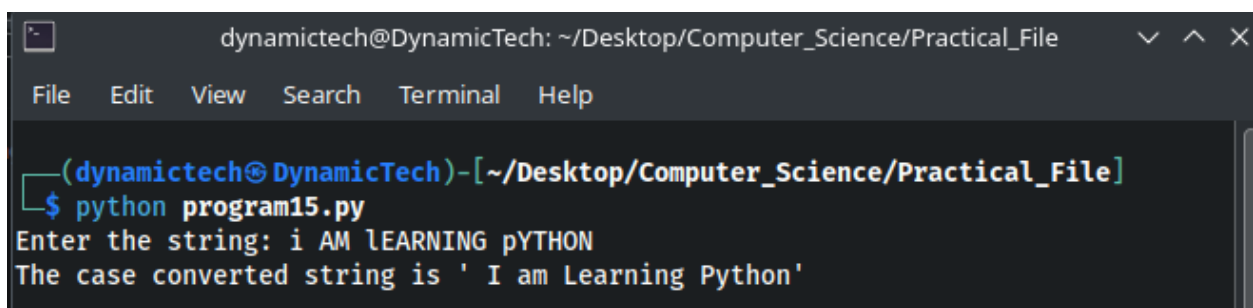
Output: