UNIVERSITY OF KARACHI

MATHEMATICS DEPARTMENT

Assignment of

PYTHON PROGRAMMING LANGUAGE-I

Name: **Sadaf Azhar**

Father Name: **M. Azhar Hameed**

Seat No: **EB-20202071**

Submitted To: Sir Umaid Ahmed

Program No # 01

Area of a Circle

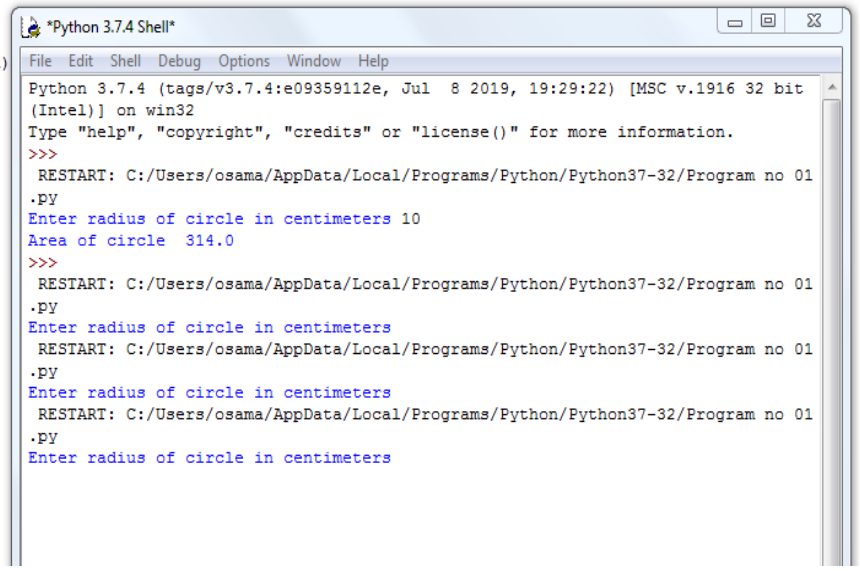
```
#Area of a Circle


pi=3.14

r = float(input("Enter radius of circle in centimeters"))

area = pi*r**2

print("Area of circle ",area)
```



Program No# 02

Euclidean Distance

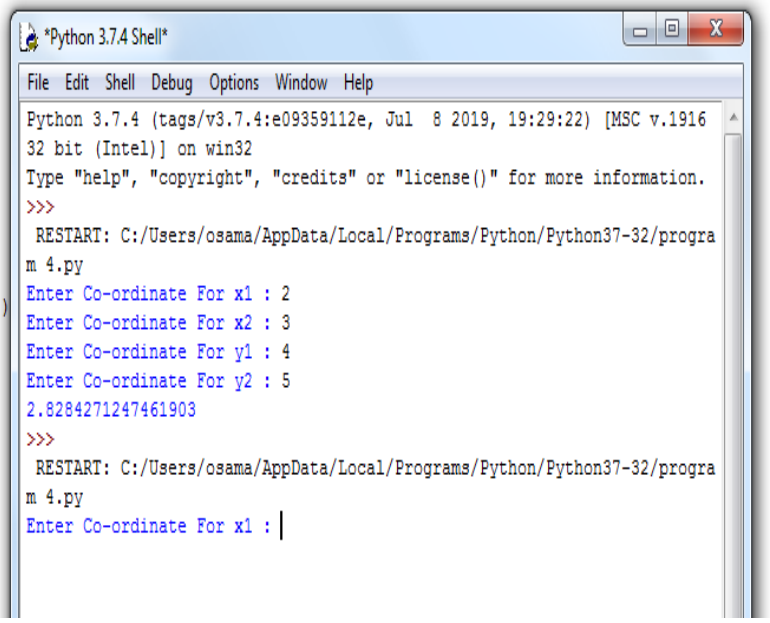
```
# Euclidean Distance


import math


x1 = int(input("Enter Co-ordinate For x1 : "))
x2 = int(input("Enter Co-ordinate For x2 : "))
y1 = int(input("Enter Co-ordinate For y1 : "))
y2 = int(input("Enter Co-ordinate For y2 : "))


distance = math.sqrt( ((x1-y1)**2)+( (x2-y2)**2) )

print(distance)
```



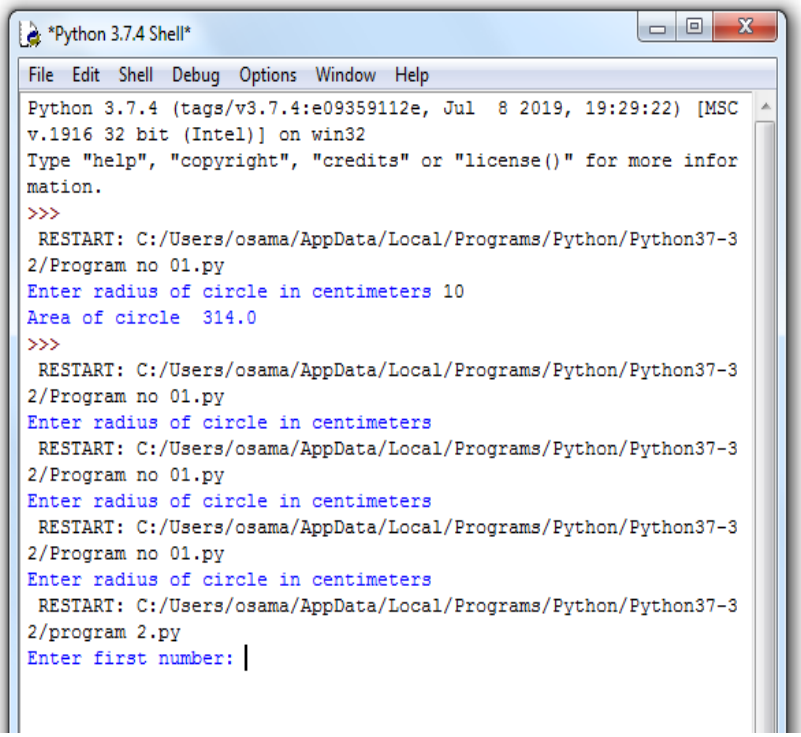
Program No #03

Median of three values

```
#Median of three values

a = float(input("Enter first number: "))
b = float(input("Enter second number: "))
c = float(input("Enter third number: "))
if a > b:
    if a < c:
        median = b
    elif b > c:
        median = b
    else:
        median = c
else:
    if a > c:
        median = a
    elif b < c:
        median = b
    else:
        median = c

print("The median is",median)
```



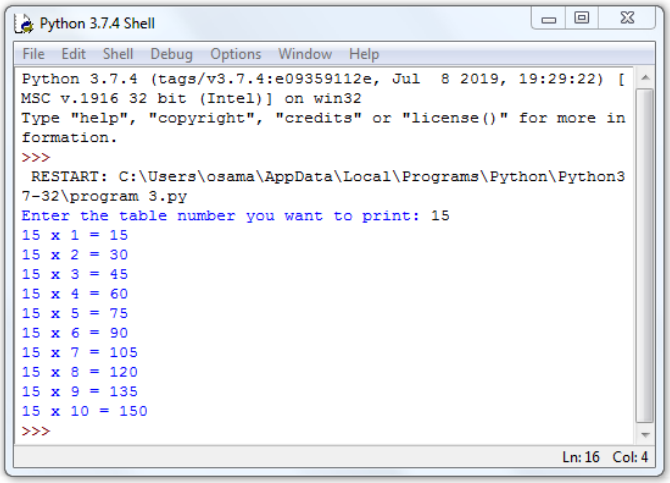
Program No # 04

Multiplication Table

```
#multiplication table


table_number = int(input("Enter the table number you want to print: "))

for n in range(1,11):
    print(table_number,"x", n, "=", table_number*n)
```



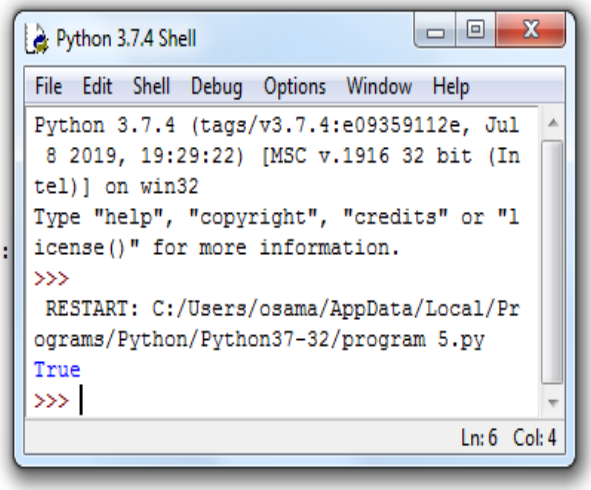
Program No # 05

String is Palindrome or Not

```
#checkind whether the string is Palindrome or Not


def is_Palindrome(string):
    left_pos = 0
    right_pos = len(string) - 1

    while right_pos >= left_pos:
        if not string[left_pos] == string[right_pos]:
            return False
        left_pos += 1
        right_pos -= 1
    return True
print(is_Palindrome('aza'))
```



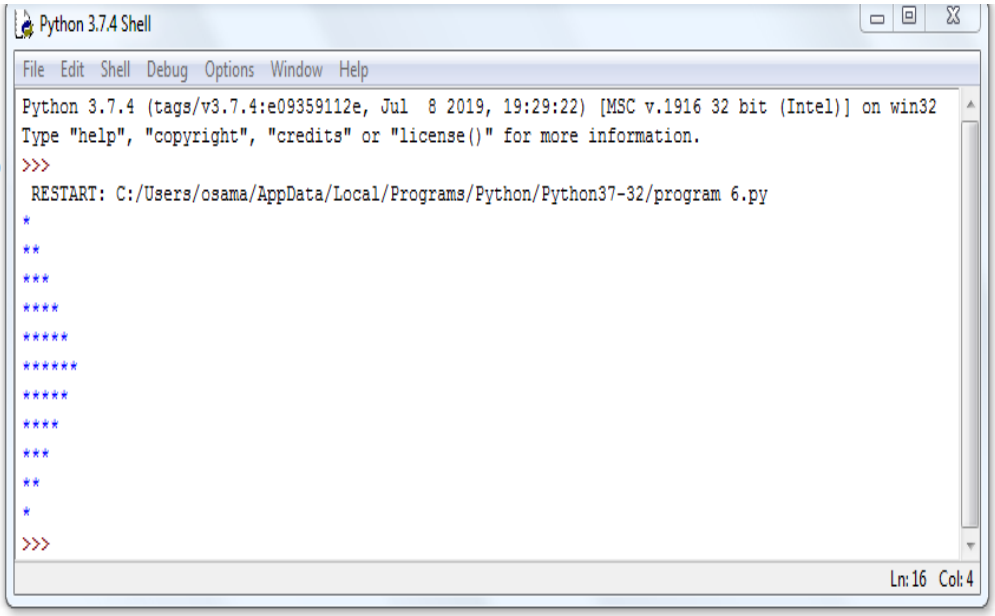
Program No # 06

Pattern Printing

```
# pattern printing


for i in range(1,6):
    for j in range(i):
        print ('*', end="")
    print('')

for i in range(6,0,-1):
    for j in range(i):
        print('*', end="")
    print('')
```



Program No # 07

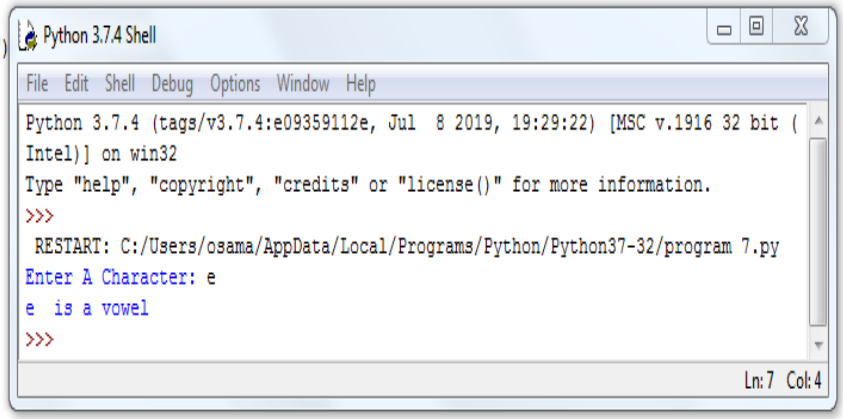
Vowel Tester

```
# vowel tester


vowels = ['A','E','I','O','U','a','e','i','o','u']

userinput = input("Enter A Character: ")

if userinput in vowels:
    print(userinput," is a vowel")
else:
    print(userinput," is not a vowel")
```

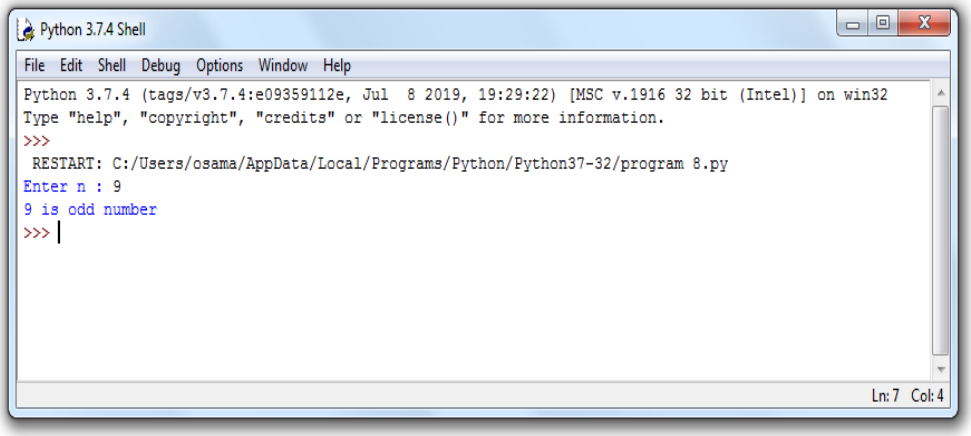


Program No # 08

Number is Even or Odd

```python
# checking number is Even or Odd

n = int(input("Enter n : "))
if (n%2 == 0):
    print (n,"is even number")
else:
    print (n,"is odd number")
```



Program No # 09

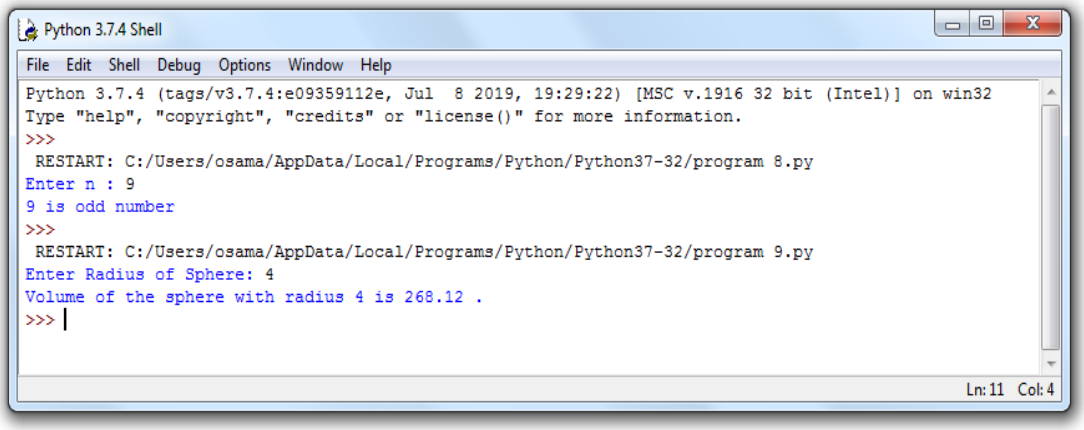
Volume of Sphere

```python
# Volume of a Sphere

pi = 3.142
radius_sphere = int(input("Enter Radius of Sphere: "))

volume_of_sphere = 4/3 * pi * radius_sphere**3

print("Volume of the sphere with radius " + str(radius_sphere) + " is " + "%.2f" % volume_of_sphere + " .")
```



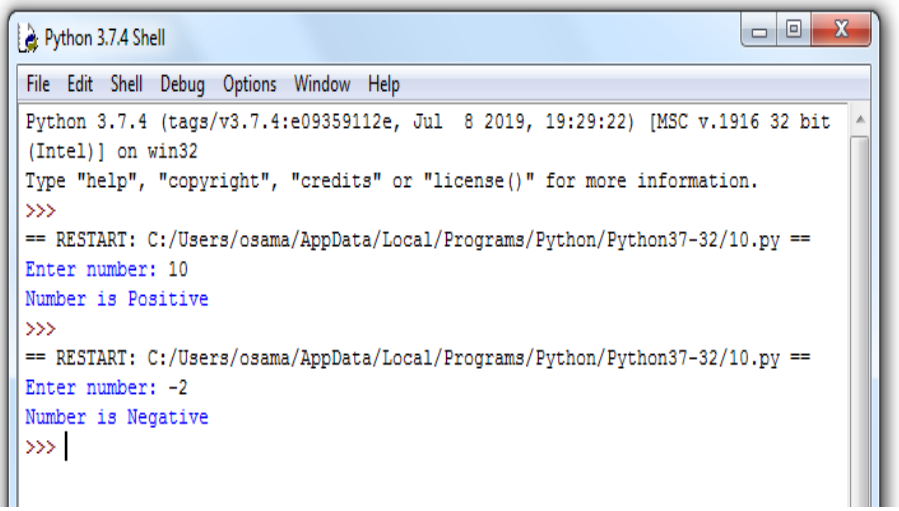
Program No # 10

Number Positive, Negative or Zero

```
# checking number either positive, negative or zero

n = int(input("Enter number: "))


if(n>0):
    print("Number is Positive")
elif(n<0):
    print("Number is Negative")
else:
    print("Number is Zero")
```



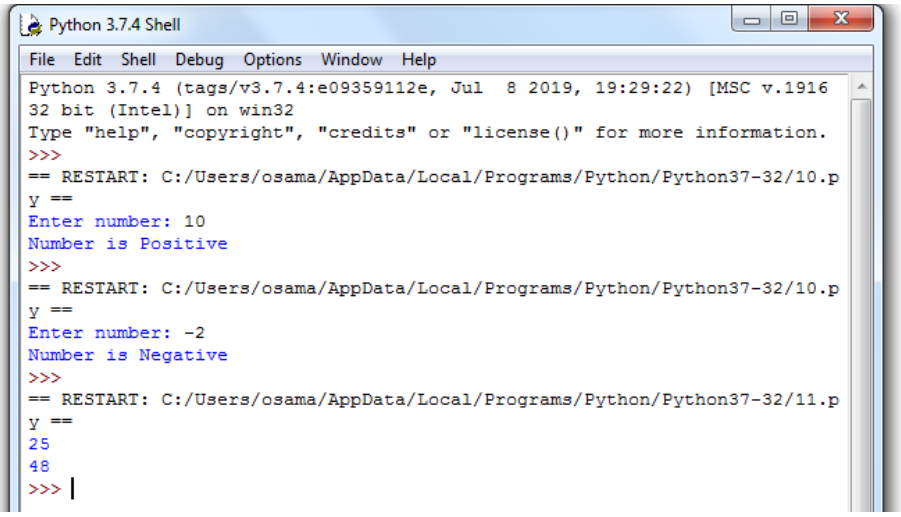
Program No # 11

Lambda Function

```
# lambda function


r = lambda a : a + 15
print(r(10))

r = lambda x,y : x * y
print(r(12, 4))
```



Program No # 12

BMI Calculator

```
# BMI Calculator

x = float(input("Enter your Height in m: "))
y = float(input("Enter your Weight in kg: "))


z = y / x**2


print("Your Body Mass Index is: ",z)
```