**MORADABAD INSTITUTE OF TECHNOLOGY**

MORADABAD

Department Of Computer Science and Engineering

**COURSE: B.TECH YEAR: 2ND SEMESTER: 4TH**



**PYTHON PROGRAMMING LAB FILE ( KCS 453 )**

**SUBMITTED TO : MR. VIBHOR KUMAR VISHNOI SUBMITTED BY : YASH BHATNAGAR**

**ROLL NO. : 200082010156**

**SECTION : C**

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| 2. | Write a python program to perform matrix multiplication. |  |  |  |
| 3. | Write a python program to compute the GCD of two numbers. |  |  |  |
| 4. | Write a python program to find the most frequent words in a text file. |  |  |  |
| 5. | Write a python program to find the square root of a number  (Newton’s method) |  |  |  |
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| 15. | Write a python program to check a number is palindrome. |  |  |  |
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# PROGRAM-01

**Objective:-** Write a python program that takes in command line arguments as input and print the number of arguments.

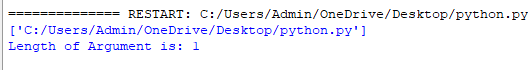
# Source Code:-

import sys print(sys.argv) n=len(sys.argv)

print("Length of Argument is:",n)

# OUTPUT:-

**USING IDLE:-**



**USING CMD:-**

PYTHON2.png

# PROGRAM-02

**Objective:-** Write a python program to perform Matrix Multiplication.

# Source Code:-

R1 = int(input("Enter the number of rows in 1st matrix: "))

C1 = int(input("Enter the number of columns in 1st matrix: "))

A = []

print("Enter the values in 1st matrix:")

for i in range(R1):

a = []

for j in range(C1):

a.append(int(input()))

A.append(a)

R2 = int(input("Enter the number of rows in 2nd matrix: "))

C2 = int(input("Enter the number of columns in 2nd matrix: "))

B = []

print("Enter the values in 2nd matrix:")

for i in range(R2):

b = []

for j in range(C2):

b.append(int(input()))

B.append(b)

result = []

for i in range(R1):

res = []

for j in range(C2):

res.append(0)

result.append(res)

for i in range(len(A)):

for j in range(len(B[0])):

for k in range(len(B)):

result[i][j] += A[i][k] \* B[k][j]

print("\nFinal Matrix is:\n")

for r in result:

print(r)

**OUTPUT:-**

# PROGRAM-03

**Objective:-** Write a python program to compute the GCD of two numbers.

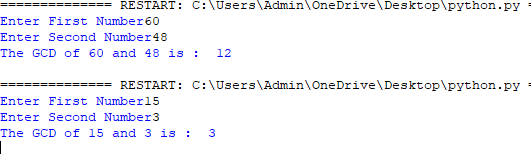
# Source Code:-

import math

m=int(input("Enter First Number")) n=int(input("Enter Second Number"))

print("The GCD of",m,"and",n,"is : ",math.gcd(m,n))

# OUTPUT:-



**PROGRAM-04**

**Objective:-** Write a python program to find the most frequent words in a text file.

# Source Code:-

**OUTPUT:-**

# PROGRAM-05

**Objective:-** Write a python program to find the square root of a number (Newton’s method).

# Source Code:-

**BY NEWTON’S METHOD:-**

x=1

n=int(input("Enter Any Number")) for i in range(25):

x=x-(x\*x-n)/(2\*x) print(round(x,4))

**BY MATH.SQRT METHOD:-**

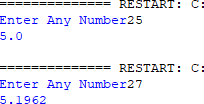
import math

n=int(input("Enter Any Number"))

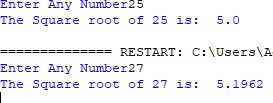
print(“The Square root of”,n,”is: ”,round(math.sqrt(n),4))

# OUTPUT:-

**BY NEWTON’S METHOD:-**



**BY MATH.SQRT METHOD:-**



# PROGRAM-06

**Objective:-** Write a python program exponentiation (power of a number).

**Source Code:-**

**OUTPUT:-**

**BY IDLE FILE:-**

n=int(input("Enter Any Number=\t")) p=int(input("Enter Exponent=\t\t")) pow=1

for i in range(1,p+1): pow=pow\*n

print("The power of given number is=\t",pow)

**BY IDLE FILE:-**

python.PNG

**BY IDLE SHELL:-**

python.PNG

# PROGRAM-07

**Objective:-** Write a python program to find the maximum of a list of numbers.

# Source Code:-

**OUTPUT:-**

# PROGRAM-08

**Objective:-** Write a python program Linear search.

# Source Code:-

**OUTPUT:-**

# PROGRAM-09

**Objective:-** Write a python program Binary search.

# Source Code:-

**OUTPUT:-**

# PROGRAM-10

**Objective:-** Write a python program Selection Sort.

# Source Code:-

**OUTPUT:-**

# PROGRAM-11

**Objective:-** Write a python program Insertion Sort.

# Source Code:-

**OUTPUT:-**

# PROGRAM-12

**Objective:-** Write a python program Merge Sort.

# Source Code:-

**OUTPUT:-**

# PROGRAM-13

**Objective:-** Write a python program first n prime numbers.

# Source Code:-

**OUTPUT:-**

# PROGRAM-14

**Objective:-** Write a python program simulate bouncing ball in pygame.

# Source Code:-

**OUTPUT:-**

# PROGRAM-15

**Objective:-** Write a python program to check a number is Palindrome.

# Source Code:-

n=int(input("Enter Any Number=\t")) rev=n

palindrome=0 while rev>0:

a=rev%10 print("a=",a)

palindrome=palindrome\*10+a print("palindrome=",palindrome)

rev=rev//10

print("reverse=",rev) if n==palindrome:

print("Number is palindrome")

else:

print("Number is not palindrome")

# OUTPUT:-

