**MORADABAD INSTITUTE OF TECHNOLOGY**

MORADABAD

Department Of Computer Science and Engineering

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

Logo

Description automatically generated

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

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**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) |  |  |  |
| 6. | Write a python program exponentiation (power of a number). |  |  |  |
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# PROGRAM-01

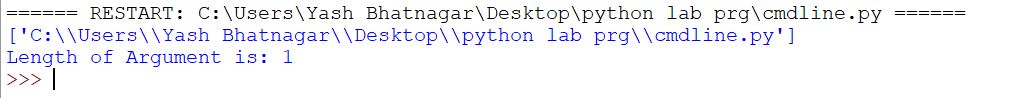
**Objective:-** Write a python program that takes in command line arguments as input and print the number of arguments.

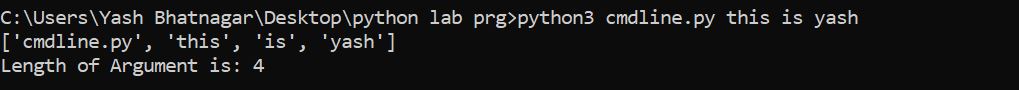
# Source Code:-

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

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

# OUTPUT:-

**USING IDLE:-** 

**USING CMD:-** 

# PROGRAM-02

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

# Source Code:-

**METHOD 1:-**

# # Program to multiply two matrices

# A=[]

# n=int(input("Enter N for N x N matrix: "))

# print("Enter the element ::>")

# for i in range(n):

# row=[]

# for j in range(n):

# row.append(int(input()))

# A.append(row)

# print(A)

# # Display the 2D array

# print("Display Array In Matrix Form")

# for i in range(n):

# for j in range(n):

# print(A[i][j], end=" ")

# print()

# B=[]

# n=int(input("Enter N for N x N matrix: "))

# print("Enter the element ::>")

# for i in range(n):

# row=[]

# for j in range(n):

# row.append(int(input()))

# B.append(row)

# print(B)

# # Display the 2D array

# print("Display Array In Matrix Form")

# for i in range(n):

# for j in range(n):

# print(B[i][j], end=" ")

# print()

# result = [[0,0,0],[0,0,0],[0,0,0]]

# 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("The Result Matrix is::>")

# for r in result:

# print(r)

**OUTPUT:-**

# PROGRAM-03

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

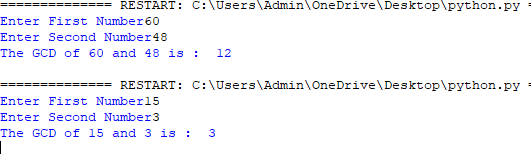
# Source Code:-

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:-**

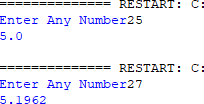
import math

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

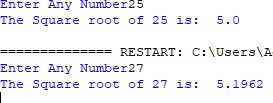
print(“The Square root of”,n,”is: ”,round(math.sqrt(n),4))

# 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:-

