

|         |   |                  |
|---------|---|------------------|
| S.No: 1 | Exp. Name: <b><i>Write a python script to display a simple message.</i></b> | Date: 2024-02-28 |
|---------|---|------------------|

**Aim:**

Write a python script to display a simple message.

**Source Code:**

```
sample_messag.py
```

```
print("Welcome to Python Programming Lab")
```

### Execution Results - All test cases have succeeded!

|                                   |
|-----------------------------------|
| Test Case - 1                     |
| <b>User Output</b>                |
| Welcome to Python Programming Lab |

**S.No: 2**

Exp. Name: **Write a python script to perform basic arithmetic operations on two values which are accepted from the user**

**Date: 2024-02-29**

**Aim:**

Write a python script to perform basic arithmetic operations on two values which are accepted from the user

**Source Code:**

**operation.py**

```
#To perrform Arithmetic operations on two values input from User
num1 = int(input("Enter a number1: "))
num2 = int(input("Enter a number2: "))
print("Addition of {} and {} is {}".format(num1,num2,eval('num1+num2')))
print("Subtraction of {} from {} is {}".format(num1,num2,eval('num1-num2')))
print("Multiplication of {} with {} is {}".format(num1,num2,eval('num1*num2')))
print("Division of {} by {} is {}".format(num1,num2,eval('num1/num2')))
print("Modulus of {} by {} is {}".format(num1,num2,eval('num1%num2')))
print("Floor Division of {} by {} is {}".format(num1,num2,eval('num1//num2')))
print("Exponent of {} to the power of {} is {}".format(num1,num2,eval('num1**num2')))
```

### Execution Results - All test cases have succeeded!

**Test Case - 1**

**User Output**

Enter a number1:

8

Enter a number2:

4

Addition of 8 and 4 is 12

Subtraction of 8 from 4 is 4

Multiplication of 8 with 4 is 32

Division of 8 by 4 is 2.0

Modulus of 8 by 4 is 0

Floor Division of 8 by 4 is 2

Exponent of 8 to the power of 4 is 4096

S.No: 3

Exp. Name: **Write a python script to calculate the factorial of a given number.**

Date: 2024-02-29

**Aim:**

Write a python script to calculate the factorial of a given number.

**Source Code:**

factorial.py

```
n=int(input('Enter a number :'))  
x = n  
fact=1  
while(x>0):  
    fact=fact*x  
    x=x-1  
print('Factorial of',n,'is',fact)
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Enter a number :

5

Factorial of 5 is 120

S.No: 4

Exp. Name: **Write a python script to calculate sum of individual digits of a given number**

Date: 2024-02-29

**Aim:**

Write a python script to calculate sum of individual digits of a given number

**Source Code:**

sumofindi.py

```
print("Sum of individual difits of a given number ")
num = int(input("Enter a number :"))
s = 0
num1 = num
while(num>1):
    d = num%10
    s = s +d
    num = int(num/10)
print("The sum of {} is : {}".format(num1,s))
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Sum of individual difits of a given number

Enter a number :

5234

The sum of 5234 is : 14

S.No: 5

Exp. Name: **Write a python script to display the prime number series up to the given N Value**

Date: 2024-02-29

**Aim:**

Write a python script to display the prime number series up to the given N Value

**Source Code:**

prime\_interval.py

```
start = int(input("Enter Starting value :"))
end = int(input("Enter Ending value :"))
for i in range(start,end+1):
    if i>1:
        for j in range(2,i):
            if(i % j==0):
                break
        else:
            print(i)
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Enter Starting value :

2

Enter Ending value :

11

2

3

5

7

11

**S.No: 6**

Exp. Name: **Write a python script to find the largest number among three numbers and display them in ascending order using if-else construct.**

**Date: 2024-02-29**

**Aim:**

Write a python script to find the largest number among three numbers and display them in ascending order using if-else construct.

**Source Code:**

**largeAscending.py**

```
print("To find largest among three numbers and display in ascending order")
a = int(input("Enter first number :"))
b = int(input("Enter Second number :"))
c = int(input("Enter Third number :"))
if a>b:
    if a>c:
        l=a
    else:
        l=c
else:
    if(b>c):
        l=b
    else:
        l=c
print("Largest number is :",l)
li = [a,b,c]
li.sort()
print("Ascending Order is :",li)
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

To find largest among three numbers and display in ascending order

Enter first number :

10

Enter Second number :

20

Enter Third number :

30

Largest number is : 30

Ascending Order is : [10, 20, 30]

**Test Case - 2**

**User Output**

To find largest among three numbers and display in ascending order

Enter first number :

12

Enter Second number :

25

Enter Third number :

98

Largest number is : 98

Ascending Order is : [12, 25, 98]

S.No: 7

Exp. Name: **Write a python script to create a simple text file, write the contents into the created file and display the same on to the console screen.**

Date: 2024-03-01

**Aim:**

Write a python script to create a simple text file, write the contents into the created file and display the same on to the console screen.

**Source Code:**

text\_display.py

```
f=input("Enter file name: ")
f1=open(f,'r')
print(f1.read())
f1.close
f2=open(f,'a')
f2.write("Stay Home Stay Safe")
f2=open(f,'r')
print(f2.read())
f2.close()
```

MyFile.txt

Hello Every one!

MyFile2.txt

content of file after reading -

### Execution Results - All test cases have succeeded!

#### Test Case - 1

##### User Output

Enter file name:

MyFile.txt

Hello Every one!

Hello Every one! Stay Home Stay Safe

S.No: 8

Exp. Name: **Write a python script to remove all the occurrences of a given character from a text file; copy the resultant text into another text file. Find the total occurrences of the eliminated characters and display the count along with the contents of the text file on to the console.**

Date: 2024-05-18

**Aim:**

Write a python script to remove all the occurrences of a given character from a text file; copy the resultant text into another text file. Find the total occurrences of the eliminated characters and display the count along with the contents of the text file on to the console.

**Source Code:**

occurrences.py

```
#Type Content here...
f1 = open("textfile.txt", 'w')
f1.write("Write a python script to remove all the occurrences of a given character from a text file; copy the resultant text into another text file. Find the total occurrences of the eliminated characters and display the count along with the contents of the text file on to the console.")
f1.close()
f2=open("textfile.txt",'r')
print("**** TEXT IN A FILE ****")
print(f2.read())
f2.seek(0)
f3=open("textfile2.text", 'w')
char = input("Enter a character to count its occurrence:")
count=0
rc=-1
while(rc):
    rc=f2.read(1)
    if rc==char:
        count+=1
    else:
        f3.write(rc)
f2.close()
f3.close()
print("Total count of "+ char +" is ",count)
f4=open("textfile2.text",'r')
print("**** Text after eliminating "+char+" ****")
print(f4.read())
f4.close()
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

\*\*\*\* TEXT IN A FILE \*\*\*\*

Write a python script to remove all the occurrences of a given character from a text file; copy the resultant text into another text file. Find the total occurrences of the eliminated characters and display the count along with the contents of the text file on to the console.

Enter a character to count its occurrence:

e

Total count of e is 31

\*\*\*\* Text after eliminating e \*\*\*\*

Writ a python script to rmov all th occurrncts of a givn charactr from a txt fil; copy th rsltant txt into another txt fil. Find th total occurrncts of th liminatd charactrs and display th count along with th contnts of th txt fil on to th consol.

### Test Case - 2

#### User Output

\*\*\*\* TEXT IN A FILE \*\*\*\*

Write a python script to remove all the occurrences of a given character from a text file; copy the resultant text into another text file. Find the total occurrences of the eliminated characters and display the count along with the contents of the text file on to the console.

Enter a character to count its occurrence:

i

Total count of i is 12

\*\*\*\* Text after eliminating i \*\*\*\*

Wrte a python scrpt to remove all the occurrences of a gven character from a text fle; copy the resultant text nto another text fle. Fnd the total occurrences of the elmnated characters and dsplay the count along wth the contents of the text fle on to the console.

S.No: 9

Exp. Name: **Write a python script to display Fibonacci sequence of numbers using while loop constructs.**

Date: 2024-03-01

**Aim:**

Write a python script to display Fibonacci sequence of numbers using while loop constructs.

**Source Code:**

`fibonacci_while.py`

```
print("Fibonacci Sequence")
n=int(input("Enter length of series :"))
print("Fibonacci Sequence using while loop")
a=0
b=1
print(a)
print(b)
i=2
while(i<n):
    c=a+b
    print(c)
    a=b
    b=c
    i=i+1
```

**Execution Results - All test cases have succeeded!**

| Test Case - 1                       |  |
|-------------------------------------|--|
| <b>User Output</b>                  |  |
| Fibonacci Sequence                  |  |
| Enter length of series :            |  |
| 5                                   |  |
| Fibonacci Sequence using while loop |  |
| 0                                   |  |
| 1                                   |  |
| 1                                   |  |
| 2                                   |  |
| 3                                   |  |

**S.No: 10**

Exp. Name: ***Write a python script to display Fibonacci sequence of numbers using for loop constructs.***

**Date: 2024-03-01**

**Aim:**

Write a python script to display Fibonacci sequence of numbers using for loop constructs.

**Source Code:**

`fibonacci_for.py`

```
print("Fibonacci Sequence using for loop")
n=int(input("Enter length of series :"))
a=0
b=1
print(a)
print(b)
for i in range(2,n):
    c=a+b
    print(c)
    a=b
    b=c
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

```
Fibonacci Sequence using for loop
Enter length of series :
5
0
1
1
2
3
```

**S.No: 11**

Exp. Name: **Write a python script to display Fibonacci sequence of numbers using do-while loop constructs.**

**Date: 2024-03-01**

**Aim:**

Write a python script to display Fibonacci sequence of numbers using do-while loop constructs.

**Source Code:**

Fibonacci.py

```
print("Fibonacci Sequence emulating do-while")
n=int(input("Enter length of series :"))
a=0
b=1
print(a)
print(b)
i=0
while(True):
    c=a+b
    print(c)
    a=b
    b=c
    i=i+1
    if(i>=n-2):
        break
```

## Execution Results - All test cases have succeeded!

### Test Case - 1

#### User Output

```
Fibonacci Sequence emulating do-while
Enter length of series :
5
0
1
1
2
3
```

### Test Case - 2

#### User Output

```
Fibonacci Sequence emulating do-while
Enter length of series :
7
0
1
1
2
```

|   |
|---|
| 3 |
| 5 |
| 8 |

|          |  |                  |
|----------|--|------------------|
| S.No: 12 | Exp. Name: <b>Write a python script to demonstrate string methods.</b> 01.Capitaize the first character<br>02.Casefold the characters 03.Center the string<br>04.count the character 'a' in string 05.Encode to a binary<br>06.Check where the string ends with *<br>07.Check the position of the substring 'find' in the given input.<br>08.Starting index of 'c' character in a string<br>09.Check the string is numeric<br>10.Check the string is alphabet<br>11.Check the string is lower<br>12.split the string | Date: 2024-05-18 |
|----------|--|------------------|

**Aim:**

Write a python script to demonstrate string methods.  
 01.Capitaize the first character  
 02.Casefold the characters  
 03.Center the string  
 04.count the character 'a' in string  
 05.Encode to a binary  
 06.Check where the string ends with \*  
 07.Check the position of the substring 'find' in the given input.  
 08.Starting index of 'c' character in a string  
 09.Check the string is numeric  
 10.Check the string is alphabet  
 11.Check the string is lower  
 12.split the string

**Source Code:**

```
string_methods.py
```

```
a=input("Enter String: ")
print("python script to demonstrate string methods")
print("To Capitalize first character ",a.capitalize())
print("To casefold the characters",a.casefold())
print("To center the string",a.center(75,"*"))
print("To count the character 'a' in string",a.count('a'))
print("To encode to a binary",a.encode())
print("To check where the string ends with *",a.endswith("*"))
print("To find the substring starting position",a.find("t",-1))
print("To get the starting index of 'c' character in a string",a.index('c'))
print("To check the string is numeric",a.isalnum())
print("To check the string is alphabet",a.isalpha())
print("To check the string is lower",a.islower())
print("To split the string",a.split())
```

**Execution Results - All test cases have succeeded!**

| Test Case - 1 |  |
|---------------|--|
| User Output   |  |
| Enter String: |  |
| codetantra    |  |

```
python script to demonstrate string methods
To Capitalize first character Codetantra
To casefold the characters codetantra
To center the string
*****codetantra*****
To count the character 'a' in string 2
To encode to a binary b'codetantra'
To check where the string ends with * False
To find the substring starting position -1
To get the starting index of 'c' character in a string 0
To check the string is numeric True
To check the string is alphabet True
To check the string is lower True
To split the string ['codetantra']
```

S.No: 13

Exp. Name: **Write a python script to create a list and add n number of user-defined values to the list and display the same on to the console screen.**

Date: 2024-03-01

**Aim:**

Write a python script to create a list and add n number of user-defined values to the list and display the same on to the console screen.

**Source Code:**

list\_creation.py

```
l=[]
n=int(input("Enter the size of list :"))
for val in range(n):
    ele=int(input("Enter the {} element :".format(val)))
    l.append(ele)
print("The elements in the list are :")
for val in l:
    print(val,end=' ')
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Enter the size of list :

5

Enter the 0 element :

1

Enter the 1 element :

5

Enter the 2 element :

3

Enter the 3 element :

6

Enter the 4 element :

5

The elements in the list are :

1 5 3 6 5

S.No: 14

Exp. Name: **Write a Python program to perform addition of two matrices**

Date: 2024-05-18

**Aim:**

Write a **Python** program to find addition of two matrices.

**Sample Input and Output-1:**

```
Number of rows for matrix - A, m = 2
Number of columns for matrix - A, n = 3
Number of rows for matrix - B, p = 2
Number of columns for matrix - B, q = 3
Enter values for matrix - A
Entry in row: 1 column: 1
Entry in row: 1 column: 2
Entry in row: 1 column: 3
Entry in row: 2 column: 1
Entry in row: 2 column: 2
Entry in row: 2 column: 3
Enter values for matrix - B
Entry in row: 1 column: 1
Entry in row: 1 column: 2
Entry in row: 1 column: 3
Entry in row: 2 column: 1
Entry in row: 2 column: 2
Entry in row: 2 column: 3
Matrix a = [[11, 22, 33], [44, 55, 66]]
Matrix b = [[1, 2, 3], [4, 5, 6]]
Addition of two matrices = [[12, 24, 36], [48, 60, 72]]
```

**Sample Input and Output-2:**

```
Number of rows for matrix - A, m = 2
Number of columns for matrix - A, n = 2
Number of rows for matrix - B, p = 2
Number of columns for matrix - B, q = 3
Addition is not possible
```

**Source Code:**

```
Lab11b.py
```

```

m = int(input('Number of rows for matrix - A, m = '))
n = int(input('Number of columns for matrix - A, n = '))
p = int(input('Number of rows for matrix - B, p = '))
q = int(input('Number of columns for matrix - B, q = '))
A=[]
B=[]
if(m==p and n==q):
    print("Enter values for matrix - A")
    for i in range(1,m+1):
        a=[]
        for j in range(1,n+1):
            print("Entry in row: {} column: {}".format(i,j))
            a.append(int(input()))
        A.append(a)
    print("Enter values for matrix - B")
    for i in range(1,p+1):
        b=[]
        for j in range(1,q+1):
            print("Entry in row: {} column: {}".format(i,j))
            b.append(int(input()))
        B.append(b)
    print("Matrix a =",A)
    print("Matrix b =",B)
    sum=A.copy()
    for i in range(m):
        for j in range(n):
            sum[i][j]=A[i][j]+B[i][j]
    print("Addition of two matrices =",sum)
else:
    print("Addition is not possible")

```

## Execution Results - All test cases have succeeded!

| Test Case - 1                         |
|---------------------------------------|
| <b>User Output</b>                    |
| Number of rows for matrix - A, m =    |
| 2                                     |
| Number of columns for matrix - A, n = |
| 3                                     |
| Number of rows for matrix - B, p =    |
| 2                                     |
| Number of columns for matrix - B, q = |
| 3                                     |
| Enter values for matrix - A           |
| Entry in row: 1 column: 1             |
| 11                                    |
| Entry in row: 1 column: 2             |
| 22                                    |
| Entry in row: 1 column: 3             |
| 33                                    |
| Entry in row: 2 column: 1             |

|   |
|---|
| 44  |
| Entry in row: 2 column: 2                               |
| 55  |
| Entry in row: 2 column: 3                               |
| 66  |
| Enter values for matrix - B                             |
| Entry in row: 1 column: 1                               |
| 1   |
| Entry in row: 1 column: 2                               |
| 2   |
| Entry in row: 1 column: 3                               |
| 3   |
| Entry in row: 2 column: 1                               |
| 4   |
| Entry in row: 2 column: 2                               |
| 5   |
| Entry in row: 2 column: 3                               |
| 6   |
| Matrix a = [[11, 22, 33], [44, 55, 66]]                 |
| Matrix b = [[1, 2, 3], [4, 5, 6]]                       |
| Addition of two matrices = [[12, 24, 36], [48, 60, 72]] |

|                                       |
|---------------------------------------|
| <b>Test Case - 2</b>                  |
| <b>User Output</b>                    |
| Number of rows for matrix - A, m =    |
| 2                                     |
| Number of columns for matrix - A, n = |
| 2                                     |
| Number of rows for matrix - B, p =    |
| 2                                     |
| Number of columns for matrix - B, q = |
| 3                                     |
| Addition is not possible              |

|                                       |
|---------------------------------------|
| <b>Test Case - 3</b>                  |
| <b>User Output</b>                    |
| Number of rows for matrix - A, m =    |
| 2                                     |
| Number of columns for matrix - A, n = |
| 2                                     |
| Number of rows for matrix - B, p =    |
| 2                                     |
| Number of columns for matrix - B, q = |
| 2                                     |
| Enter values for matrix - A           |
| Entry in row: 1 column: 1             |
| 1                                     |

Entry in row: 1 column: 2

2

Entry in row: 2 column: 1

3

Entry in row: 2 column: 2

4

Enter values for matrix - B

Entry in row: 1 column: 1

1

Entry in row: 1 column: 2

2

Entry in row: 2 column: 1

3

Entry in row: 2 column: 2

4

Matrix a = [[1, 2], [3, 4]]

Matrix b = [[1, 2], [3, 4]]

Addition of two matrices = [[2, 4], [6, 8]]

#### **Test Case - 4**

##### **User Output**

Number of rows for matrix - A, m =

3

Number of columns for matrix - A, n =

3

Number of rows for matrix - B, p =

3

Number of columns for matrix - B, q =

3

Enter values for matrix - A

Entry in row: 1 column: 1

1

Entry in row: 1 column: 2

2

Entry in row: 1 column: 3

3

Entry in row: 2 column: 1

4

Entry in row: 2 column: 2

5

Entry in row: 2 column: 3

6

Entry in row: 3 column: 1

7

Entry in row: 3 column: 2

8

Entry in row: 3 column: 3

9

Enter values for matrix - B

Entry in row: 1 column: 1

9

Entry in row: 1 column: 2

8

Entry in row: 1 column: 3

7

Entry in row: 2 column: 1

6

Entry in row: 2 column: 2

5

Entry in row: 2 column: 3

4

Entry in row: 3 column: 1

3

Entry in row: 3 column: 2

2

Entry in row: 3 column: 3

1

Matrix a = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

Matrix b = [[9, 8, 7], [6, 5, 4], [3, 2, 1]]

Addition of two matrices = [[10, 10, 10], [10, 10, 10], [10, 10, 10]]

S.No: 15

Exp. Name: **Write a python program to perform Matrix Multiplication.**

Date: 2024-05-18

**Aim:**

Write a python program to perform Matrix Multiplication.

**Source Code:**

matrixmul.py

```
A=[]
print("Enter values for matrix - A")
m=int(input("Number of rows, m = "))
n=int(input("Number of columns, n = "))
for i in range(m):
    a=[]
    for j in range(n):
        print("Entry in row: {} column: {}".format(i+1,j+1))
        a.append(int(input()))
    A.append(a)
B=[]
print("Enter values for matrix - B")
p=int(input("Number of rows, m = "))
q=int(input("Number of columns, n = "))
for i in range(p):
    b=[]
    for j in range(q):
        print("Entry in row: {} column: {}".format(i+1,j+1))
        b.append(int(input()))
    B.append(b)
print("Matrix - A =",A)
print("Matrix - B =",B)
if(n==p):
    mul=[]
    for j in range(len(A)):
        m1=[]
        for j in range(len(B[0])):
            m1.append(0)
        mul.append(m1)
    for i in range(len(A)):
        m1=[]
        for j in range(len(B[0])):
            for k in range(len(B)):
                mul[i][j]+=A[i][k]*B[k][j]
    print("Matrix - A * Matrix- B =",mul)
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Enter values for matrix - A

Number of rows, m =

3

Number of columns, n =

3

Entry in row: 1 column: 1

12

Entry in row: 1 column: 2

7

Entry in row: 1 column: 3

3

Entry in row: 2 column: 1

4

Entry in row: 2 column: 2

5

Entry in row: 2 column: 3

6

Entry in row: 3 column: 1

7

Entry in row: 3 column: 2

8

Entry in row: 3 column: 3

9

Enter values for matrix - B

Number of rows, m =

3

Number of columns, n =

4

Entry in row: 1 column: 1

5

Entry in row: 1 column: 2

8

Entry in row: 1 column: 3

1

Entry in row: 1 column: 4

2

Entry in row: 2 column: 1

6

Entry in row: 2 column: 2

7

Entry in row: 2 column: 3

3

Entry in row: 2 column: 4

0

Entry in row: 3 column: 1

4

Entry in row: 3 column: 2

5

Entry in row: 3 column: 3

9

Entry in row: 3 column: 4

1

```
Matrix - A = [[12, 7, 3], [4, 5, 6], [7, 8, 9]]  
Matrix - B = [[5, 8, 1, 2], [6, 7, 3, 0], [4, 5, 9, 1]]  
Matrix - A * Matrix- B = [[114, 160, 60, 27], [74, 97, 73, 14], [119, 157, 112, 23]]
```

**S.No: 16**

Exp. Name: **Write a program to find a given element, if the element to be found and its next element are the same then return True as output, otherwise return False.**

**Date: 2024-03-02**

**Aim:**

Write a program to find the given element in a list. If the element to be found and its next element are the same, then return **True**, otherwise return **False**.

**Sample Input and Output - 1:**

```
list1: 32,36,36,5  
num: 36  
True
```

**Sample Input and Output - 2:**

```
list1: 33,34,35  
num: 34  
False
```

**Source Code:**

List15.py

```
list_values=input("data: ").split(",")  
for n in range(0,len(list_values)):  
    list_values[n]=int(list_values[n])  
print(f"list: {list_values}")  
number=int(input("num: "))  
number_exists=False  
for i in range(0,len(list_values)):  
    if(list_values[i]==number and list_values[i+1]==number):  
        number_exists = True  
        break;  
print(number_exists)
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

```
data:  
10,20,30  
list: [10, 20, 30]  
num:  
20  
False
```

### Test Case - 2

#### User Output

data:

10,20,20,30

list: [10, 20, 20, 30]

num:

20

True

S.No: 17

Exp. Name: **Write a python script to arrange the given list of elements in ascending or descending order.**

Date: 2024-03-02

**Aim:**

Write a python script to arrange the given list of elements in ascending or descending order.

**Source Code:**

order.py

```
str=input("Enter list of numbers: ")
li=list(map(int,str.split(" ")))
li.sort()
print(li)
li.sort(reverse=True)
print(li)
```

### Execution Results - All test cases have succeeded!

#### Test Case - 1

**User Output**

Enter list of numbers:

2 5 8 96 3 1 4 7

[1, 2, 3, 4, 5, 7, 8, 96]

[96, 8, 7, 5, 4, 3, 2, 1]

#### Test Case - 2

**User Output**

Enter list of numbers:

25 63 47 85 41 69

[25, 41, 47, 63, 69, 85]

[85, 69, 63, 47, 41, 25]

S.No: 18

Exp. Name: **Write a Python program to find gcd of two numbers**

Date: 2024-03-02

**Aim:**

Write a Python program to find the GCD of two numbers.

**Source Code:**

gcdOfTwoNumbers.py

```
import math
def comput_gcd(x,y):
    if((x>0)and(y>0)):
        gcd=math.gcd(x,y)
        return gcd
    else:
        gcd=math.gcd(x,y)
        return -gcd
n1=int(input("Enter first number: "))
n2=int(input("Enter second number: "))
print("The gcd of two numbers is:",comput_gcd(n1,n2))
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Enter first number:

10

Enter second number:

20

The gcd of two numbers is: 10

**Test Case - 2**

**User Output**

Enter first number:

78

Enter second number:

9

The gcd of two numbers is: 3

S.No: 19

Exp. Name: **Write a python script to find GCD of two numbers using recursive**

Date: 2024-05-18

**Aim:**

Write a python script to find GCD of two numbers using recursive.

**Source Code:**

gcd.py

```
def gcd(a,b):
    if(b==0):
        return a
    else:
        return gcd(b,a%b)
a=int(input("Enter first number:"))
b= int(input("Enter second number:"))
GCD=gcd(a,b)
print("GCD is: ",GCD)
```

**Execution Results - All test cases have succeeded!**

**Test Case - 1**

**User Output**

Enter first number:

12

Enter second number:

6

GCD is: 6

S.No: 20

Exp. Name: **Write a Python program to convert temperatures to and from Celsius, Fahrenheit.**

Date: 2024-05-18

**Aim:**

Write a Python program to convert temperatures to and from Celsius, Fahrenheit.

**Source Code:**

temperature.py

```
a=input("Enter the temperature in celsius or fahrenheit: ")
b=int(a[:-1])
c=a[-1]
if(c=="C" or c=="c"):
    result=int(round((9*b)/5+32))
    d="Fahrenheit"
elif (c=="F" or c=="f"):
    result=int(round((b-32)*5/9))
    d="Celsius"
else:
    print("Enter the proper convention")
    quit()
print("The temperature in",d,"is",result,"degrees")
```

## Execution Results - All test cases have succeeded!

### Test Case - 1

#### User Output

Enter the temperature in celsius or fahrenheit:

215c

The temperature in Fahrenheit is 419 degrees

### Test Case - 2

#### User Output

Enter the temperature in celsius or fahrenheit:

105F

The temperature in Celsius is 41 degrees