

Programming Assignment 5

Write a Python Program to Find LCM?

Write a Python Program to Find HCF?

Write a Python Program to Convert Decimal to Binary, Octal and Hexadecimal?

Write a Python Program To Find ASCII value of a character?

Write a Python Program to Make a Simple Calculator with 4 basic mathematical operations?

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In [1]: #Write a Python Program to Find LCM?
while(True):
    try:
        a=int(input('Enter a number to find LCM: '))
        b=int(input('Enter another number to find LCM: '))
        break
    except:
        print('Invalid number')
        continue

big=-1
small=-1
if(a>b):
    big=a
    small=b
else:
    big=b
    small=a
small_list=[]
big_list=[]
i=0

while(True):
    i+=1
    small_list.append(i*small)
    big_list.append(i*big)
    if(i*small in big_list):
        print('LCM of {} and {} is :'.format(a,b),i*small)
        break
```

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Enter a number to find LCM: 45
Enter another number to find LCM: 90
LCM of 45 and 90 is : 90
```

```
In [2]: #2 Write a Python Program to Find HCF?
while(True):
    try:
        a=int(input('Enter a number to find HCF: '))
        b=int(input('Enter another number to find HCF: '))
```

```

        break
    except:
        print('Invalid number')
        continue

i=0
j=0

a_fact=[]
b_fact=[]
hcf=-1
#finding factors of first number entered
while(i!=a):
    i+=1
    if(a%i==0):
        a_fact.append(i)

#finding factors of second number entered
while(j!=b):
    j+=1
    if(b%j==0):
        b_fact.append(j)

#determining which one of two number is the smaller one hence the less number of fac
if(len(a_fact)<len(b_fact)):
    small=a_fact
    big=b_fact
else:
    small=b_fact
    big=a_fact

#sorting the factors in descending order
small.sort(reverse=True)
big.sort(reverse=True)

#comparing the each factors of the small number with all the factors of the big numb
for k in range(len(small)):
    if (hcf>0):
        break

    for i in range(len(big)):
        if(small[k] == big[i]):
            hcf=small[k]

print('The HCF of number {} and {} is : '.format(a, b), hcf)

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Enter a number to find HCF: 34
Enter another number to find HCF: 98
The HCF of number 34 and 98 is : 2

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In [3]: #3. Write a Python Program to Convert Decimal to Binary, Octal and Hexadecimal
while(True):
    try:
        dec=int(input('Enter a number to find the binary, octal and hexadecimal val
        break
    except Exception as e:
        print(e)
        continue

```

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print("The decimal value of", dec, "is:")
print(bin(dec), "in binary.")
print(oct(dec), "in octal.")
print(hex(dec), "in hexadecimal.")
```

Enter a number to find the binary, octal and hexadecimal values 4
 The decimal value of 4 is:
 0b100 in binary.
 0o4 in octal.
 0x4 in hexadecimal.

```
In [4]: #4. Write a Python Program To Find ASCII value of a character
while(True):
    try:
        caar=input('Enter 1 character to find its ascii value ')
        if(len(caar)>1):

            raise Exception("Sorry, enter 1 character")
        break

    except Exception as e:
        print(e)
        continue
print ('Ascii value of {} is {}'.format(caar, ord(caar)))
```

Enter 1 character to find its ascii value #
 Ascii value of # is 35

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In [5]: #5. Write a Python Program to Make a Simple Calculator with 4 basic mathematical ope
print('Choose the operation that you want to do: ')
print("1 to add 2 numbers" )
print("2 to subtract 2 numbers" )
print("3 to multiply 2 numbers" )
print("4 to divide 2 numbers" )

result=None
descops=["1 : add 2 numbers","2 : subtract 2 numbers","3 : multiply 2 numbers","4 :

while(True):
    try:
        ops= int(input ())
        if(ops>4 or ops < 0):
            raise Exception("Sorry, Enter any of these values [1 for addition ,2 for
        break
    except Exception as e:
        print(e)
        continue
    try:
        num1= float(input ('Please enter the 1st number '))
        num2= float(input ('Please enter the 2nd number '))
        if ops==1:

            result=num1 + num2
        elif ops==2:

            result=num1 - num2
        elif ops==3:

            result=num1 * num2
        elif ops==4:

            result=num1 / num2
        print('Operation selected was {} and numbers are {}, and {}. The result is {}'.f
    except Exception as e:
```

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print('Error: ',e)
```

Choose the operation that you want to do:

1 to add 2 numbers

2 to subtract 2 numbers

3 to multiply 2 numbers

4 to divide 2 numbers

4

Please enter the 1st number 12

Please enter the 2nd number 3

Operation selected was 4 : divide 2 numbers and numbers are 12.0, and 3.0. The result is 4.0