BASIC PHYTON ASSIGNMENT 5

#1. Write a Python Program to Find LCM?

```
def lcm(num1,num2):
    '''
    this function will compute the LCM of two numbers
    '''
    try:
        if num1 > num2:
            greater = num1
        else:
            greater = num2

        while True:
            if greater % num1 == 0 and greater % num2 == 0:
                lcm = greater
                break
            greater += 1
        return lcm
    except Exception as e:
        print("\nSome exception occurred: ",e)

try:
    num1 = int(input("Enter 1st number: "))
    num2 = int(input("Enter 2nd number: "))
    print("\nThe L.C.M of {} and {} is {}.".format(num1,num2,lcm(num1,num2)))
except Exception as e:
    print("\nSome exception occurred: ",e)
```

```
Enter 1st number: 12
Enter 2nd number: 14

The L.C.M of 12 and 14 is 84.
```

In [9]:

#2. Write a Python Program to Find HCF?

```
def hcf(num1,num2):
```

```
    '''
    this function will compute the HCF of two numbers
    '''
    try:
        if num1 < num2:
            smaller = num1
        else:
            smaller = num2

        for i in range(1,smaller+1):
            if num1 % i == 0 and num2 % i == 0:
                hcf = i
        return hcf
    except Exception as e:
        print("\nSome exception occurred: ",e)

try:
    num1 = int(input("Enter 1st number: "))
    num2 = int(input("Enter 2nd number: "))
    print("\nThe H.C.F of {} and {} is {}.".format(num1,num2,hcf(num1,num2)))
except Exception as e:
    print("\nSome exception occurred: ",e)
```

```
Enter 1st number: 54
Enter 2nd number: 24

The H.C.F of 54 and 24 is 6.
```

In [26]:

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

```
def decimal_to_others(number):
    """
    This function will convert and print Decimal value to Binary, Octal and Hexadecimal
    """
    print("\n{} in binary is {}.".format(number,bin(number)))
    print("{} in octal is {}.".format(number,oct(number)))
```

```
    print("{} in hexadecimal is {}.".format(number,hex(number)))

    return

try:
    number = int(input("Enter the number: "))
    decimal_to_others(number)
except Exception as e:
    print("\nSome exception occurred: ",e)
```

```
Enter the number: 34

34 in binary is 0b100010.
34 in octal is 0o42.
34 in hexadecimal is 0x22.
```

In [35]:

```
#4.        Write a Python Program To Find ASCII value of a character?

def char_to_ascii(char):
    """
    This function will print the ASCII value of any character.
    """
    print("\nThe ASCII value of {} is {}.".format(char,ord(char)))

    return

try:
    while True:
        char = input("Enter any character: ")
        if len(char) > 1 or len(char) == 0:
            continue
        else:
            break
    char_to_ascii(char)
except Exception as e:
    print("\nSome exception occurred: ",e)
```

```
Enter any character: @
```

The ASCII value of @ is 64.

In [38]:

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

```
"""
This is a basic calculator which will perform 4 fundamental arithmetic calculations.
"""

def add(num1,num2):
    try:
        add = num1 + num2
    except Exception as e:
        print("\nSome exception occurred: ",e)

    return add

def subtract(num1,num2):
    try:
        subtract = num1 - num2
    except Exception as e:
        print("\nSome exception occurred: ",e)

    return subtract

def multiply(num1,num2):
    try:
        multiply = num1 * num2
    except Exception as e:
        print("\nSome exception occurred: ",e)

    return multiply

def divide(num1,num2):
    try:
        divide = num1/num2
    except Exception as e:
```

```
        print("\nSome exception occurred: ",e)

    return divide

try:
    while True:
        print("\n================ Menu ================\n")
        print("1. Addition\n2. Subtraction\n3. Multiplication\n4. Division\n5.Exit\n")
        choice = int(input("\nEnter your choice: "))

        if choice in (1,2,3,4):
            num1 = float(input("Enter 1st number: "))
            num2 = float(input("Enter 2nd number: "))

            if choice == 1:
                print("\nAddition of {} and {} is
{}.".format(num1,num2,add(num1,num2)))
            elif choice == 2:
                print("\nSubtraction of {} and {} is
{}.".format(num1,num2,subtract(num1,num2)))
            elif choice == 3:
                print("\nMultiplication of {} and {} is
{}.".format(num1,num2,multiply(num1,num2)))
            elif choice == 4:
                print("\nDivision of {} and {} is
{}.".format(num1,num2,divide(num1,num2)))
        elif choice == 5:
            print("\nProgram Terminated Successfully.")
            break
        else:
            print("\nInvalid choice. Please select from Menu.")
except Exception as e:
    print("\nSome exception occurred: ",e)
```

```
================ Menu ================

1. Addition
2. Subtraction
```

3. Multiplication
4. Division
5.Exit

Enter your choice: 1
Enter 1st number: 10
Enter 2nd number: 20

Addition of 10.0 and 20.0 is 30.0.

========== Menu ==========

1. Addition
2. Subtraction
3. Multiplication
4. Division
5.Exit

Enter your choice: 2
Enter 1st number: 10
Enter 2nd number: 20

Subtraction of 10.0 and 20.0 is -10.0.

========== Menu ==========

1. Addition
2. Subtraction
3. Multiplication
4. Division
5.Exit

Enter your choice: 3
Enter 1st number: 10

Enter 2nd number: 20

Multiplication of 10.0 and 20.0 is 200.0.

========== Menu ==========

1. Addition
2. Subtraction
3. Multiplication
4. Division
5.Exit

Enter your choice: 4
Enter 1st number: 10
Enter 2nd number: 20

Division of 10.0 and 20.0 is 0.5.

========== Menu ==========

1. Addition
2. Subtraction
3. Multiplication
4. Division
5.Exit

Enter your choice: 6

Invalid choice. Please select from Menu.

========== Menu ==========

1. Addition
2. Subtraction
3. Multiplication

4. Division
5.Exit

Enter your choice: 7

Invalid choice. Please select from Menu.

========== Menu ==========

1. Addition
2. Subtraction
3. Multiplication
4. Division
5.Exit

Enter your choice: 5

Program Terminated Successfully.

In [ ]: