Assignment NO:2

Question 1: Variables and Data Types Problem:

Write a Python program that: 1. Accepts a string, an integer, a float, and a boolean from the user. 2. Initializes variables for each type and prints them out. 3. Convert the string to uppercase and print it. 4. Check if the integer is even or odd and print the result. 5. Multiply the float by 2 and print the result.

Solution:

```
#Input Block of code
string_1=input("Enter a string:")
number=int(input("Enter an integer:"))
decimal_number=float(input("Enter a float:"))
boolean_number=bool(input("Enter a boolean (True/False):"))
#Output Display Block of code
print("Uppercase String : ",string_1.upper())
if number%2==0:
    print(f"The number {number} is Even")
else:
    print(f"The number {number} is Odd")
print("Doubled float: ",decimal_number*2)
```

Question 2: Operators

Write a Python program that: 1. Accepts two numbers as input from the user. 2. Performs and prints the result of all the arithmetic operations (addition, subtraction, multiplication, division, modulus, flow division) between these two numbers. 3. Use comparison operators to check if the first number is greater than the second, and if they are equal. 4. Use logical operators to combine two conditions (e.g., the first number is greater than the second, and the second number is less than 10).

Solution:

```
#Taking numbers from user
num1=int(input("Enter the first number :"))
num2=int(input("Enter the second number :"))
#Performing Arithematic Operations
print("Addition",num1+num2)
print("Subtraction",num1-num2)
print("Multiplication",num1*num2)
print("Division",num1/num2)
print("Modulus",num1%num2)
print("Flow Division",num1//num2)
#use of Comparison Logical Operatiosn
print(f"First number is grater than second : ",num1>num2)
print(f"First number is equal to second :",num1==num2)
print("Both conditions are true :",num1>num2 and num2<10)
```

Question 3: Loops Problem

Write a Python program that: 1. Accepts a list of integers from the user. 2. Loops through the list and prints out each number. 3. If a number is greater than 10, skip it using the continue statement. 4. Stop the loop if the number is 20 using the break statement. 5. After the loop ends, print a message that the loop ended naturally.

Solution :

```
#taking a list from user
list_of_integer = list(map(int, input("Enter a list of numbers separated by
spaces: ").split()))
for x in list_of_integer:

    if x>10:
        continue
    print(x)
    if x==20:
        break
    #message will be printed after thr lopp ended
print("Loop ended naturally")
```