**Task Two**

**Operators and Decision Making Statements**

1) Write a program in Python to perform the following operation:

* If a number is divisible by 3 it should print “Consultadd” as a string
* If a number is divisible by 5 it should print “Python Training” as a string
* If a number is divisible by both 3 and 5 it should print “Consultadd-Python Training” as a string.

z=5

if (z%5==0 and z%3==0):

    print("ConsultAdd-Python Training")

elif (z%5==0):

    print("Python-Training")

elif (z%3==0):

    print("ConsultAdd")

2) Write a program in Python to perform the following operator based task:

* Ask user to choose the following option first:
* If User enters 1-Addition
* If User enters 2-Subtraction
* If User enters 3-Division
* If User enters 4-Multiplication
* If User enters 5-Average
* Ask user to enter two numbers and keep those numbers in variables num1 and num2 respectively for the first 4 options mentioned above.
* Ask the user to enter two more numbers as first and second for calculating the average as soon as the user chooses an option 5.
* At the end if the answer of any operation is Negative print a statement saying “NEGATIVE”

x=input("Enter 1st number:")

y=input("Enter 2nd number:")

num1=int(x)

num2=int(y)

z=input("Enter a number between 1 to 5:")

option=int(z)

if option==1:

    print("You've selected addition:",(num1+num2))

elif option==2:

    print("You've selected subtraction:",(num1-num2))

elif option==3:

    print("You've selected division:",(num1/num2))

elif option==4:

    print("You've selected multiplication:",(num1\*num2))

elif option==5:

    a=input("Enter first number for average:")

    b=input("Enter second number for average:")

    c=int(a)

    d=int(b)

    print("You've selected average:",((c+d)/2))

3) Write a program in Python to implement the given flowchart

a=10

b=20

c=30

avg=(a+b+b)/3

print("Avg=",avg)

if (avg>a and avg>b and avg>c):

    print("avg is higher than a,b,c.")

elif (avg>a and avg>b):

    print("avg is higher than a and b.")

elif (avg>a and avg>c):

    print ("avg is higher than a and c.")

elif (avg>b and avg>c):

    print ("avg is higher than b and c.")

elif (avg>a):

    print ("avg is higher than a.")

elif (avg>b):

    print ("avg is higher than b.")

elif (avg>c):

    print ("avg is higher than just c.")

4) Write a program in Python to break and continue if the following cases occurs:

* If user enters a negative number just break the loop and print “It’s Over”
* If user enters a positive number just continue in the loop and print “Good Going”

x=input("Enter your input:")

y=int(x)

if (y>0):

    print("Good Going")

else:

    print("It's Over")

5) Write a program in Python which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200.

begin=2000

end=3200

for cnt in range(begin, end+1):

    if( cnt%7==0 and cnt%5!=0 ):

        print (cnt)

6) What is the output of the following code examples?

Prints values from 0 to 122

Prints 0 error 1 error 2

Prints 0 1 2 3 4

7) Write a program that prints all the numbers from 0 to 6 except 3 and 6.

for i in [0,1,2,3,4,5,6]:

    if(i==3 or i==6):

        continue

    print(i)

8) Write a program that accepts a string as an input from the user and calculate the number of digits and letters.

x=input("Enter a string:")

alphabets = digits = 0

for i in range(len(x)):

    if(x[i].isalpha()):

        alphabets = alphabets + 1

    elif(x[i].isdigit()):

        digits = digits + 1

print("\nTotal Number of Alphabets in this String :  ", alphabets)

print("Total Number of Digits in this String :  ", digits)

9) Read the two parts of the question below:

* Write a program such that it asks users to “guess the lucky number”. If the correct number is guessed the program stops, otherwise it continues forever.
* Modify the program so that it asks users whether they want to guess again each time. Use two variables, ‘number’ for the number and ‘answer’ for the answer to the question whether they want to continue guessing. The program stops if the user guesses the correct number or answers “no”. (The program continues as long as a user has not answered “no” and has not guessed the correct number)

answer="Y"

while(answer=="Y"):

    x=input("Guess the lucky number:")

    number=int(x)

    if(number==10):

        print("Congratulations!")

        answer="N"

    else:

        answer=input("Sorry, wrong answer! Do you want to continue?(Y/N) ")

10) Write a program that asks five times to guess the lucky number. Use a while loop and a counter, such as

counter=1

While counter <= 5:

print(“Type in the”, counter, “number”

counter=counter+1

The program asks for five guesses (no matter whether the correct number was guessed or not). If the correct number is guessed, the program outputs “Good guess!”, otherwise it outputs “Try again!”. After the fifth guess it stops and prints “Game over!”.

counter=1

while(counter<=5):

    print("Type in the ",counter," number:")

    x=input()

    counter+=1

    number=int(x)

    if(number==10):

        print("Good guess!")

        break

    else:

        print("Try again.")

11) In the previous question, insert break after the “Good guess!” print statement. break will terminate the while loop so that users do not have to continue guessing after they found the number. If the user does not guess the number at all, print “Sorry but that was not very successful”.

counter=1

while(counter<=5):

    print("Type in the ",counter," number:")

    x=input()

    counter+=1

    number=int(x)

    if(number==10):

        print("Good guess!")

        break

    else:

        print("Try again.")

print("Sorry but that was not very successful")