**TASK ONE NUMBERS AND VARIABLES**

1. Create three variables in a single line and assign values to them in such a manner that each one of

them belongs to a different data type.

E.g. :

a = 1,

b = 2.01,

c = 'string'

Ans.

a, b, c = 1, 2.01, “string”

2. Create a variable of type complex and swap it with another variable of type integer.

Ans.

a = 2+3j

b = 5

a, b = b, a

3. Swap two numbers using a third variable and do the same task without using any third variable.

Ans.

a = 2+3j

b = 5

# Swap two numbers using a third variable

c = a

a = b

b = c

# Same task without using any third variable

a, b = b, a

4. Write a program that takes input from the user and prints it using both Python 2.x and Python 3.x

Version.

Ans.

A = input(“user enter value or string here: ”)

Python 2.x

Print “A”

Python 3.x

Print(“A”)

5. Write a program to complete the task given below:

Ask users to enter any 2 numbers in between 1-10, add the two numbers and keep the sum in

another variable called z. Add 30 to z and store the output in variable result and print result as the

final output.

Ans.

User\_input\_ 1= input(“enter any numbers in between 1-10: ”)

User\_input\_ 2= input(“enter any numbers in between 1-10: ”)

Z = User\_input\_ 1 + User\_input\_ 2

Result = Z + 30

Print(“result”)

6. Write a program to check the data type of the entered values.

HINT: Printed output should say - The data type of the input value is : int/float/string/etc

Ans.

User\_input = input(“enter any Valuse: ”)

Print(type(User\_input))

7. Create Variables using formats such as Upper CamelCase, Lower CamelCase, SnakeCase and

UPPERCASE.

Ans.

Upper CamelCase = UserInput

Lower CamelCase = userInput

SnakeCase = User\_input

UPPERCASE = USERINPUT

8. If one data type value is assigned to ‘a’ variable and then a different data type value is assigned to ‘a’

again. Will it change the value? If Yes then Why?

Ans.

a = 9

a = “string”

Yes, it will change the value because in python when we assign new value it will remove the previous values and store the new value in that variable.

TASK TWO OPERATORS AND DECISION MAKING STATEMENT

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.

Ans.

User\_input\_ = input(“enter numbers : ”)

If (User\_input % 3 == 0) and (User\_input % 5 == 0):

print (“Consultadd - Python Training”)

elif (User\_input % 5 == 0):

print (“Python Training”)

elif (User\_input % 3 == 0):

print (“Consultadd”)

1. Write a program in Python to perform the following operator based task:

Ask user to choose the following option first:

If User Enter 1 - Addition

If User Enter 2 - Subtraction

If User Enter 3 - Division

If User Enter 4 - Multiplication

If User Enter 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”

NOTE: At a time a user can only perform one action.

Ans.

User\_Calculation = input(“”” User Enter 1 - Addition

User Enter 2 - Subtraction

User Enter 3 - Division

User Enter 4 - Multiplication

User Enter 5 – Average :”””)

Result = 0

L = []

If (User\_Calculation < 5):

Num1 = input(“enter the first number:”)

Num2 = input(“enter the Second number:”)

L = [Num1, Num2]

If (User\_Calculation == 1):

Result = (Num1 + Num2)

If (User\_Calculation == 2):

Result = (Num1 – Num2)

If (User\_Calculation == 3):

Result = (Num1 / Num2)

If (User\_Calculation == 4):

Result = (Num1 \* Num2)

elif (User\_Calculation == 5):

N = (int(input(“enter numbers of value :”))+1

For x in range(N):

V = int(input(“enter value: “))

L.append(V)

Result = L / len(L)

else:

Print(“ Please enter the right number”)

if (result<0):

Print(“Result is negative”)

Print(“Result : “ , Result)

1. Write a program in Python to implement the given flowchart:

Ans.

a, b, c = 10, 20, 30

avg = (a + b + c)

Print (“avg =”, avg)

if (avg > a) and (avg > b) and (avg > c):

Print(“avg is higher than a, b, c”)

else:

if (avg > a) and (avg > b):

Print(“avg is higher than a, b ”)

elif (avg > a) and (avg > c):

Print(“avg is higher than a, c ”)

elif (avg > c) and (avg > b):

Print(“avg is higher than c, b ”)

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 c ”)

1. 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”

Ans.

User\_enter = 1

While (User\_enter > 0):

User\_enter = input(“enter any number :”)

If (User\_enter > 0):

Print(“Good Going”)

else :

Print(“It’s Over”)

User\_enter = 0

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.

Ans.

L = [range(2000,3200,1)]

A = []

for x in L:

if (x%7 == 0) and (x%5 == 0):

A.append(x)

Print(A)

1. What is the output of the following code examples?
2. I\P :

X = 123

for i in x:

Print(i)

O\P :

1

2

3

1. I\P:

i = 0

while I < 5:

Print(i)

i+=1

if i == 3 :

break

else:

Print(“error”)

O/P:

0

error

1

error

2

1. I\P:

count = 0

while True:

Print(“count”)

Count += 1

If count >= 5:

Break

O\P:

0

1

2

3

4

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

Expected output: 0 1 2 4 5

Note: Use ‘continue’ statement

Ans.

L = [range(0,7,1)]

for x in L:

if x%3 == 0:

continue

else:

Print(x)

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

and letters.

Sample input: consul72

Expected output: Letters 6 Digits 2

Ans.

L = “abcdefghijklmnopqrstuvwxyz”

N = [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 0]

Letter = 0

Digits = 0

Other = 0

User\_input = str(input(“enter the string you want to count numbers and letters :”)

for i in User\_input:

if i in L:

Letter += 1

elif i in N:

Digits += 1

Else:

Other += 1

1. 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)

Ans.

Import random

Game = True

While (Game == True):

X = (random.randint(0,9))

Number = int(input(“enter one number”))

if (Number = = X):

Game = False

else :

answer =( input(“enter Y for continue or N for stop the game: ”))

if answer.upper() == N:

Game = False

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!”.

Ans.

X = (random.randint(0,9))

counter = 1

While (counter <= 5):

number = int(input(“enter one number”))

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

counter=counter+1

if number == X:

Print(“Good Guess!”)

else:

Print(“Try again!”)

Print(“Game Over!”)

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”.

Ans.

X = (random.randint(0,9))

counter = 1

While (counter <= 5):

number = int(input(“enter one number”))

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

counter=counter+1

if (number == X):

Print(“Good Guess!”)

break

elif (number != X):

Print(“Try again!”)

if (counter ==6):

print (“Sorry but that was not very successful”)

Print(“Game Over!”)