**Module – 2 ASSIGNMENT**

**Data Types**

**Please implement by using Python.**

1. Construct 2 lists containing all the available data types (integer, float, string, complex and Boolean) and do the following..
   1. Create another list by concatenating above 2 lists
   2. Find the frequency of each element in the concatenated list.
   3. Print the list in reverse order.
2. Create 2 Sets containing integers (numbers from 1 to 10 in one set and 5 to 15 in other set)
   1. Find the common elements in above 2 Sets.
   2. Find the elements that are not common.
   3. Remove element 7 from both the Sets.
3. Create a data dictionary of 5 states having state name as key and number of covid-19 cases as values.
   1. Print only state names from the dictionary.
   2. Update another country and it’s covid-19 cases in the dictionary.

**Operators**

**Please implement by using Python**

1. A. Write an equation which relates 399, 543 and 12345

B. “When I divide 5 with 3, I got 1. But when I divide -5 with 3, I got -2”—How would you justify it.

2. a=5,b=3,c=10.. What will be the output of the following:

A. a/=b

B. c\*=5

3. A. How to check the presence of an alphabet ‘s’ in word “Data Science” .

B. How can you obtain 64 by using numbers 4 and 3 .

**Variables**

**Please implement by using Python**

1. What will be the output of the following (can/cannot):
2. Age1=5
3. 5age=55
4. What will be the output of following (can/cannot):
5. Age\_1=100
6. age@1=100
7. How can you delete variables in Python ?

Soln:

##################################### PROBLEM 1 ################################

#1. A. Write an equation which relates 399, 543 and 12345

#B. “When I divide 5 with 3, I got 1. But when I divide -5 with 3, I got -2”—How would you justify it.

#A.

#If 12345 is divided by 543 we get a remainder as 399 and quotient as 22

a=12345

b=543

c=399

equation = 22\*b + c

a == equation # True. hence it is valid relation.

#B.

#When 5 is divided by 3 we get a quoteint as 1 and

#when -5 is divided by 3 we get -2 as remainder.

##################################### PROBLEM 2 ################################

#2. a=5,b=3,c=10.. What will be the output of the following:

# A. a/=b

# B. c\*=5

a=5

b=3

c=10

#A.

a/=b

# Output is a=a/b (a divided by b)

#B.

c\*=5

#Output is c=c\*5 (c multiplied by 5)

##################################### PROBLEM 3 ################################

# 3. A. How to check the presence of an alphabet ‘s’ in word “Data sScience” .

# B. How can you obtain 64 by using numbers 4 and 3 .

#A.

word= 'data Science'

word.find('S')

#B.

#64 is a cube of 4.

a = 4\*\*3

a

#Operators

#Q1

#A

a=399

b=543

c=12345

#B

d=12345%543

d

a=5

b=3

c=10

a/=b

#Q2

# we get 1.6666 is the answer

c\*=5

# i get 50 is the answer

#Q3

#A

k="Data Science"

for i in k:

if (i).lower()=='s':

print(i,'is there')

#B

4\*\*3

**Variables**

1. What will be the output of the following (can/cannot):

a. Age1=5 (can)

b. 5age=55 (cannot)

2. What will be the output of following (can/cannot):

a. Age\_1=100 (can)

b. age@1=100 (cannot)

3. How can you delete variables in Python ?

using syntax: del(variables names)