Assignment # 4

1. Make a calculator using Python with addition , subtraction , multiplication ,division and power.

**Sol:**

# Python program for calculator

# Function to add two numbers

def add(num1, num2):

return num1 + num2

# Function to subtract two numbers

def subtract(num1, num2):

return num1 - num2

# Function to multiply two numbers

def multiply(num1, num2):

return num1 \* num2

# Function to divide two numbers

def divide(num1, num2):

return num1 / num2

# Square each value

def square(num):

return num \* num

print("Please select operation -\n" \

"1. Add\n" \

"2. Subtract\n" \

"3. Multiply\n" \

"4. Divide\n"

"5. Square\n")

# Take input from the user

select = int(input("Select operations form 1, 2, 3, 4, 5 :"))

number\_1 = int(input("Enter first number: "))

number\_2 = int(input("Enter second number: "))

if select == 1:

print(number\_1, "+", number\_2, "=",

add(number\_1, number\_2))

elif select == 2:

print(number\_1, "-", number\_2, "=",

subtract(number\_1, number\_2))

elif select == 3:

print(number\_1, "\*", number\_2, "=",

multiply(number\_1, number\_2))

elif select == 4:

print(number\_1, "/", number\_2, "=",

divide(number\_1, number\_2))

elif select == 5:

number = float(input(" Please Enter any numeric Value : "))

sqre = square(number)

print("The Square of a Given Number {0} = {1}".format(number, sqre))

else:

print("Invalid input")

1. Write a program to check if there is any numeric value in list using for loop.

**Sol:**

list1 = [-51,True]

for i in list1:

if (isinstance(i,int))==False and (isinstance(i,float)==False):

print("None")

1. Write a Python script to add a key to a dictionary.

**Sol:**

d = {0:”Ali”, 1:”Kamran”}

print(d)

d.update({2:”Ahsan”})

print(d)

1. Write a Python program to sum all the numeric items in a dictionary.

**Sol:**

dict = {'data1':100,'data2':-54,'data3':247}

print(sum(dict.items())

1. Write a program to identify duplicate values from list.

**Sol:**

from collections import Counter

l1 = [1,2,1,2,3,4,5,1,1,2,5,6,7,8,9,9]

d = Counter(l1)

print(d)

new\_list = list([item for item in d if d[item]>1])

print(new\_list)

1. Write a Python script to check if a given key already exists in a dictionary

def key\_in\_dict(d, key):

return (key in d)

students = {

'Theodore': 19,

'Roxanne': 22,

'Mathew': 21,

'Betty': 20

}

print("\nOriginal dictionary elements:")

print(students)

print(key\_in\_dict(students, 'Roxanne'))

print(key\_in\_dict(students, 'Gina'))

OR

Adict = {'Mon':3,'Tue':5,'Wed':6,'Thu':9}

print("The given dictionary : ",Adict)

check\_key = "Fri"

if check\_key in Adict:

print(check\_key,"is Present.")

else:

print(check\_key, " is not Present.")