Python Programming Language

Assignment # 3

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

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

# This function adds two numbers  
def add(x**,** y):  
 return x + y  
# This function subtracts two numbers  
def subtract(x**,** y):  
 return x - y  
# This function multiplies two numbers  
def multiply(x**,** y):  
 return x \* y  
# This function divides two numbers  
def divide(x**,** y):  
 return x / y  
print("Select operation.")  
print("1.Add")  
print("2.Subtract")  
print("3.Multiply")  
print("4.Divide")  
# Take input from the user  
choice = input("Enter choice(1/2/3/4):")  
num1 = int(input("Enter first number: "))  
num2 = int(input("Enter second number: "))  
if choice == '1':  
 print(num1**,**"+"**,**num2**,**"="**,** add(num1**,**num2))  
elif choice == '2':  
 print(num1**,**"-"**,**num2**,**"="**,** subtract(num1**,**num2))  
elif choice == '3':  
 print(num1**,**"\*"**,**num2**,**"="**,** multiply(num1**,**num2))  
elif choice == '4':  
 print(num1**,**"/"**,**num2**,**"="**,** divide(num1**,**num2))  
else:  
 print("Invalid input")

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

def checkIfMatch(elem):  
 if len(elem) == **5**:  
 return True;  
 else:  
 return False;  
  
  
def main():  
 # List of string  
 listOfStrings = ['You'**,** 'are'**,** 'good'**,** 'at'**,** 'python'**,** 'programming']  
  
 # Print the List  
 print(listOfStrings)  
  
 '''   
 check if element exist in list using 'in'  
 '''  
 if 'You' in listOfStrings:  
 print("Yes, 'You' found in List : "**,** listOfStrings)  
  
 '''   
 check if element NOT exist in list using 'in'  
 '''  
 if 'Java' not in listOfStrings:  
 print("Yes, 'Java' NOT found in List : "**,** listOfStrings)  
  
 '''   
 check if element exist in list using count() function  
 '''  
 if listOfStrings.count('are') > **0**:  
 print("Yes, 'are' found in List : "**,** listOfStrings)  
  
 '''   
 check if element exist in list based on custom logic  
 Check if any string with length 5 exist in List  
 '''  
 result = any(len(elem) == **6** for elem in listOfStrings)  
  
 if result:  
 print("Yes, string element with size 5 found")  
  
 '''   
 Check if any string that satisfies the condition in checkIfMatch() function exist in List  
 '''  
 result = any(checkIfMatch for elem in listOfStrings)  
  
 if result:  
 print("Yes, string element with size 5 found")  
  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 main()

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

d = {**0**:**5, 1**:**2**}  
print(d)  
d.update({-**1**:**4**})  
print(d)

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

# Function to print sum  
def returnSum(myDict):  
 sum = **0** for i in myDict:  
 sum = sum + myDict[i]  
  
 return sum  
  
  
# Driver Function  
dict = {'10': **100,** '5': **200,** 'c': -**100**}  
print("Sum :"**,** returnSum(dict))

5. Write a program to identify duplicate values from list

\_size = len(x)  
 repeated = []  
 for i in range(\_size):  
 k = i + **1** for j in range(k**,** \_size):  
 if x[i] == x[j] and x[i] not in repeated:  
 repeated.append(x[i])  
 return repeated  
# Driver Code  
list1 = [**50,70, 30, 20, 40, 30, 40,  
 50,** -**20, 60, 60,** -**20,** -**20,**-**40,40**]  
print(Repeat(list1))

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

d = {**1**: **5, 2**: **10, 3**: **15, 4**: **20, 5**: **25, 6**: **30**}  
def is\_key\_available(x):  
 if x in d:  
 print('Key is available in the dictionary')  
 else:  
 print('Key is not available in the dictionary')  
is\_key\_available(**5**)  
is\_key\_available(**9**