|  |  |
| --- | --- |
| 9. | a) Write a Python program to check if a specified element presents in a tuple of  tuples.  Original list:  ((‘Red’ ,’White’ , ‘Blue’),(‘Green’, ’Pink’ , ‘Purple’), (‘Orange’, ‘Yellow’, ‘Lime’))  Check if White present in said tuple of tuples!  True  Check if Olive present in said tuple of tuples!  False  b) Write a Python program to remove an empty tuple(s) from a list of tuples.  Sample data: [(), (), ('',), ('a', 'b'), ('a', 'b', 'c'), ('d')]  Expected output: [('',), ('a', 'b'), ('a', 'b', 'c'), 'd'] |
| 10. | a) Write a Program in Python to Find the Differences Between Two Lists Using Sets. |
| 11. | a) Write a Python program Remove duplicate values across Dictionary Values.  Input : test\_dict = {‘Manjeet’: [1], ‘Akash’: [1, 8, 9]}  Output : {‘Manjeet’: [], ‘Akash’: [8, 9]}  Input : test\_dict = {‘Manjeet’: [1, 1, 1], ‘Akash’: [1, 1, 1]}  Output : {‘Manjeet’: [], ‘Akash’: []}  b) Write a Python program to Count the frequencies in a list using dictionary in Python.  Input : [1, 1, 1, 5, 5, 3, 1, 3, 3, 1,4, 4, 4, 2, 2, 2, 2]  Output :  1 : 5  2 : 4  3 : 3  4 : 3  5 : 2  Explanation : Here 1 occurs 5 times, 2 occurs 4 times and so on... |
| 12. | a) Write a Python Program to Capitalize First Letter of Each Word in a File.b.) Write a Python Program to Print the Contents of File in Reverse Order. |
| 13. | WAP to catch an exception and handle it using try and except code blocks. |
| 14. | Write a Python Program to Append, Delete and Display Elements of a List using Classes. |
| 15. | Write a [Python Program to Find the Area and Perimeter of the Circle using Class](https://www.sanfoundry.com/python-program-class-compute-area-perimeter-circle/). |
| 16. | Create an interactive application using Python's Tkinter library for graphics programming. |

**PROGRAM 9:**

**A) Write a Python program to check if a specified element presents in a tuple of**

**tuples.**

**Original list:**

**((‘Red’ ,’White’ , ‘Blue’),(‘Green’, ’Pink’ , ‘Purple’), (‘Orange’, ‘Yellow’, ‘Lime’))**

**Check if White present in said tuple of tuples!**

**True**

**Check if Olive present in said tuple of tuples!**

**False**

**INPUT:**

n = [("Red" ,"White" , "Blue"),("Green", "Pink" , "Purple"), ("Orange", "Yellow", "Lime")]

print("Given tuple: ",n)

if any('White' in i for i in n):

   print("White is present in our tuple of tuples")

else :

   print("White is not present in our tuple of tuples")

if any("olive" in i for i in n):

   print("Olive is present in our tuple of tuples")

else :

   print("Olive is not present in our tuple of tuples")

**OUPUT:**

Given tuple: [('Red', 'White', 'Blue'), ('Green', 'Pink', 'Purple'), ('Orange', 'Yellow', 'Lime')]

White is present in our tuple of tuples

Olive is not present in our tuple of tuples

**B) Write a Python program to remove an empty tuple(s) from a list of tuples.**

**Sample data: [(), (), ('',), ('a', 'b'), ('a', 'b', 'c'), ('d')]**

**Expected output: [('',), ('a', 'b'), ('a', 'b', 'c'), 'd']**

**Expected output: [('',), ('a', 'b'), ('a', 'b', 'c'), 'd']**

**INPUT:**

num=[ (), ('',),(), ('a', 'b'), ('a', 'b', 'c'), ('d')]

for tuple in num:

if (len(tuple)==0):

num.remove(tuple)

print(num)

**OUTPUT:**

[('',), ('a', 'b'), ('a', 'b', 'c'), 'd']

**PROGRAM 10:**

**Write a Program in Python to Find the Differences Between Two Lists Using Sets.**

**INPUT:**

li1 = [10, 15, 20, 25, 30, 35, 40]

li2 = [25, 40, 35]

set\_dif = set(li1).difference(set(li2))

final = list(set\_dif)

print(final)

**OUTPUT:**

[20, 10, 30, 15]

**PROGRAM 11:**

**A) Write a Python program Remove duplicate values across Dictionary Values.**

**Input : test\_dict = {‘Manjeet’: [1], ‘Akash’: [1, 8, 9]}**

**Output : {‘Manjeet’: [], ‘Akash’: [8, 9]}**

**Input : test\_dict = {‘Manjeet’: [1, 1, 1], ‘Akash’: [1, 1, 1]}**

**Output : {‘Manjeet’: [], ‘Akash’: []}**

**INPUT:**

test\_dict = {"Manjeet": [1], "Akash": [1, 8, 9]}

print(“test\_dict= ”, test\_dict)

n=[value for values in test\_dict.values()  for value in values]

unique\_dict={key:[] for key in test\_dict}

for key,values in test\_dict.items():

    unique\_values=[value for value in values if n.count(value)==1 ]

    print(unique\_values)

    unique\_dict[key]=unique\_values

print(“UPDATED DICT: ”,unique\_dict)

**OUTPUT:**

test\_dict= {"Manjeet": [1], "Akash": [1, 8, 9]}

UPDATED DICT: {'Manjeet': [], 'Akash': [8, 9]}

**B) Write a Python program to Count the frequencies in a list using dictionary in Python.**

**INPUT:**

list= [1, 1, 1, 5, 5, 3, 1, 3, 3, 1,4, 4, 4, 2, 2, 2, 2]

dic={}

for i in list:

    if i in dic:

        dic[i]+=1

    else:

        dic[i]=1

for key,values in dic.items():

     print(f"{key}:{values}")

**OUTPUT:**

1:5

5:2

3:3

4:3

2:4

**PROGRAM 12:**

# **A) Write a Python Program to Capitalize First Letter of Each Word in a File.**

**INPUT:**

fe=open("f.txt","r")

x=fe.read()

print(x.title())

**OUTPUT:**

Hello! My Name Is Jatin

We Are At Chitkara

Enjoying Our Weekend

**B) Write a Python Program to Print the Contents of File in Reverse Order.**

**INPUT:**

fe=open("g.txt","r")

x=fe.read()

print(x)

for j in x[::-1]:

print(j,end='')

**OUTPUT:**

we are at chitkara

araktihc ta era ew

**PROGRAM 13:**

**WAP to catch an exception and handle it using try and except code blocks**

**INPUT:**

a=(input())

try:

     for i in range(1,11):

        print(f"{int(a)}x{i}={int(a)\*i}")

except Exception as e:

    print(e)

print("hello world!")

**OUTPUT :**

jatin

invalid literal for int() with base 10: 'harry'

hello world!

**PROGRAM 14:**

**Write a Python Program to Append, Delete and Display Elements of a List using Classes.**

**INPUT:**

class list\_class():

   def \_\_init\_\_(self):

      self.n=[]

   def add\_val(self,a):

      return self.n.append(a)

   def remove\_val(self,b):

      self.n.remove(b)

   def display\_val(self):

      return (self.n)

l1 = list\_class()

choice = 1

while choice!=0:

   print("0. Exit")

   print("1. Add elements")

   print("2. Delete element")

   print("3. Display list")

   choice=int(input("Enter your choice: "))

   if choice==1:

      n=int(input("Enter element to add to the list... "))

      l1.add\_val(n)

      print("List: ",l1.display\_val())

   elif choice==2:

      n=int(input("Enter number to delete.."))

      l1.remove\_val(n)

      print("List: ",l1.display\_val())

   elif choice==3:

      print("List: ",l1.display\_val())

   elif choice==0:

      print("Exit")

   else:

      print("Invalid choice!")

print()

**OUTPUT:**

0. Exit

1. Add elements

2. Delete element

3. Display list

Enter your choice: 1

Enter element to add to the list... 2

List: [2]

0. Exit

1. Add elements

2. Delete element

3. Display list

Enter your choice: 1

Enter element to add to the list... 4

List: [2, 4]

0. Exit

1. Add elements

2. Delete element

3. Display list

Enter your choice: 2

Enter number to delete..2

List: [4]

0. Exit

1. Add elements

2. Delete element

3. Display list

Enter your choice: 3

List: [4]

**PROGRAM 15:**

**Write a** [**Python Program to Find the Area and Perimeter of the Circle using Class**](https://www.sanfoundry.com/python-program-class-compute-area-perimeter-circle/)**.**

**INPUT:**

class Circle:

def \_\_init\_\_(self, radius):

self.radius = radius

def area(self):

return 3.14 \* self.radius \*\* 2

def perimeter(self):

return 2 \* 3.14 \* self.radius

c = Circle(5)

print("Area of the circle:", c.area())

print("Perimeter of the circle:", c.perimeter())

**OUTPUT:**

Area of the circle: 78.5

Perimeter of the circle: 31.400000000000002