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
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']

SOLUTION:
A)
Input:

```python
in_tuples=(
    ('Red','White','Blue'),
    ('Green','Pink','purple'),
    ('Orange','Yellow','Lime')
)
def tuples(in_tuples,c):
    result=any(c in tu for tu in in_tuples)
    return result
c1='White'
c2='Olive'
print(in_tuples)
print(f"check if {c1} present in said tuple of tuples")
print(tuples(in_tuples,c1))
print(f"check if {c2} present in said tuple of tuples")
print(tuples(in_tuples,c2))
```

Output:

```
(('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)

Input:

```
list_of_tuple=[(),(),("",),('a','b'),('a','b','c'),'d']
result=[t for t in list_of_tuple if t]
print(result)
```

Output:

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

PROGRAM 10:

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

Solution:

Input:

```
list1=[10,20,30,4,40]
list2=[20,30,50,60,80]
list1=set(list1)
list2=set(list2)
print("Difference of two lists are",list(list1.difference(list2)))
```

Output:

```
Difference of two lists are [40, 10, 4]
```

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': []}
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...

SOLUTION:
A)
Input:

```python
test_dict={'Manjeet':[1],'Akash':[1,8,9]}
list1=test_dict['Manjeet']
list2=test_dict['Akash']
new_set1=set(list1)
new_set2=set(list2)
new_set=new_set2.symmetric_difference(new_set1)
new_list=list(new_set)
test_dict['Manjeet']=new_list
test_dict['Akash']=new_list
if len(list1)==1:
    if list1==list(new_set1.intersection(new_set2)):
        test_dict['Manjeet']=[]
if len(list2)==1:
    if list2==list(new_set1.intersection(new_set2)):
        test_dict['Akash']=[]

print(test_dict)
```

Output:

```
{'Manjeet': [], 'Akash': [8, 9]}
```

B)
Input:

```python
lt=list(map(int,input().split()))
result={key:lt.count(key) for key in lt}

for ke,value in result.items():
    print(f"{ke}:{value}")
```

Output:

```
1 1 1 2 2 3 3 4 5 6 4 5 6 1 2 4 1
1:5
2:3
3:2
4:3
5:2
6:2
```
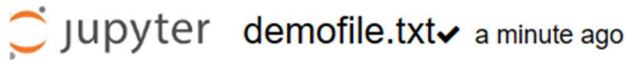
PROGRAM 12
a) Write a Python Program to Capitalize First Letter of Each Word in a File.
b.) Write a Python Program to Print the Contents of File in Reverse Order.

Solution:
A)
Input:

```python
with open("demofile.txt","w") as f:
    f.write("chitkara university at rajpura(punjab).i study in chitkara university")
with open ("demofile.txt","r") as f1:
    content=f1.read()
    modifiedcontent=content.title()

with open ("demofile.txt","w") as f2:
    f2.write(modifiedcontent)
```

Output:

Jupyter demofile.txt✔ a minute ago

File   Edit   View   Language

```
1  Chitkara University At Rajpura(Punjab).I Study In Chitkara University
```

Output:

```
1 1 1 2 2 3 3 4 5 6 4 5 6 1 2 4 1
1:5
2:3
3:2
4:3
5:2
6:2
```
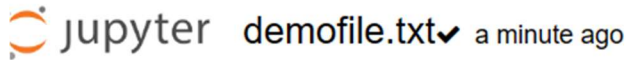
PROGRAM 12
a) Write a Python Program to Capitalize First Letter of Each Word in a File.
b.) Write a Python Program to Print the Contents of File in Reverse Order.

Solution:
A)
Input:

```python
with open("demofile.txt","w") as f:
    f.write("chitkara university at rajpura(punjab).i study in chitkara university")
with open ("demofile.txt","r") as f1:
    content=f1.read()
    modifiedcontent=content.title()

with open ("demofile.txt","w") as f2:
    f2.write(modifiedcontent)
```

Output:

Jupyter demofile.txt✔ a minute ago

File   Edit   View   Language

```
1   Chitkara University At Rajpura(Punjab).I Study In Chitkara University
```

B)
Input:

```python
with open("file.txt","w") as f:
    f.write("chitkara university at rajpura(punjab).i study in chitkara university")
with open ("file.txt","r") as f1:
    content=f1.read()
    modifiedcontent=content.split()
    li=[]
    for i in modifiedcontent:
        li.append(i)

    li.reverse()
with open ("file.txt","w") as f2:
    for j in li:
        f2.write(j)
```

Output:

Jupyter file.txt✔ a minute ago

File   Edit   View   Language

1 universitychitkarainstudyrajpura(punjab).iatuniversitychitkara

PROGRAM 13:

Write-a-program:-
*to catch an exception and handle it using try and except code blocks

SOLUTION:
Input:

```python
#13
try:
    n=(input())
    p=len(n)
    n1=int(n)
    n2=n1

    sum1=0
    for i in range(p):
        temp=n1%10
        sum1=sum1+temp**p
        n1=n1//10

    if n2==sum1:
        print("number is armstrong")
    else:
        print("number is not armstrong")
except ValueError:
    print("Error invalid input")
finally:
    print("thanks")
```

Output:

```
153.5
Error invalid input
thanks
```