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PRACTICAL 2

All List Operations, Tuple Operations, and Dictionary Operations.

```
#create a dictionary to store employee
record D = {'name': 'Bob',
            'age': 25,
            'job': 'Dev',
            'city': 'New york',
            'email': 'bb@web.com'}

#create a dictionary with a list of two-item tuples
L = [('name', 'Bob'),
      ('age', 25),
      ('job', 'Dev')]
D = dict(L) print(D)
# Prints {'name': 'Bob', 'age': 25, 'job': 'Dev'}

#create a dictionary with a tuple of two-item
lists T=(['name', 'Bob'],
          ['age', 25],
          ['job', 'dev'])
D=dict(T) print(D)

#create dictionary with list of zipped
keys/values keys = ['name', 'age', 'job'] values =
['Bob', 25, 'Dev']

D = dict(zip(keys, values))
print(D)
# Prints{'name': 'Bob', 'age': 25, 'job': 'Dev'}

#Initialize dictionary with default value '0' for each
key keys =
['a', 'b', 'c']
defaultvalue = 0

D = dict.fromkeys(keys, defaultvalue)
```

```

print(D)

D={'name':'Bob',
  'age': 25,
  'name':'Jane'} print(D)

#Immutable type

D = { (2,2): 25,
      True: 'a',
      'name': 'Bob'}

#values of different datatypes
D = {'a':[1,2,3],
      'b':[1,2,3]}

#duplicate values
D = {'a':[1,2],
      'b':[1,2],
      'c':[1,2]}

#Add or update dictionary items
D = {'name':'Bob',
      'age':25,
      'job':'Dev'}

D['name']='Sam' print(D)

#merge 2 dictionaries

D1 = {'name':' Bob',
      'age':25,
      'job':'Dev'}
D2 = {'age':30,
      'city': 'New york',
      'email':'bob@web.com'}
D1.update(D2)    print(D1)

#Remove dictionary items
D = {'name':'Bob',
      'age': 25,
      'job':'Dev'}
x =
D.pop('age')
```

```

print(D)

#remove all items
D = {'name': 'Bob',
     'age': 25,
     'job': 'Dev'}

D.clear()
print(D)

D = {'name': 'Bob',
     'age': 25,
     'job': 'Dev'}

#get all keys print(list(D.keys()))

#get all values print(list(D.values()))

```

OUTPUT

```

{'name': 'Bob', 'age': 25, 'job': 'Dev'}
{'name': 'Bob', 'age': 25, 'job': 'dev'}
{'name': 'Bob', 'age': 25, 'job': 'Dev'}
{'a': 0, 'b': 0, 'c': 0}
{'name': 'Jane', 'age': 25}
{'name': 'Sam', 'age': 25, 'job': 'Dev'}
{'name': ' Bob', 'age': 30, 'job': 'Dev', 'city': 'New york', 'email':
'bob@web.com'}
{'name': 'Bob', 'job': 'Dev'}
{}
['name', 'age', 'job']
['Bob', 25, 'Dev']
[('name', 'Bob'), ('age', 25), ('job', 'Dev')]

```

PRACTICAL 2

```

product_details=[]
supplier_details=dict()
customer_details=[] #tuple() gender={}

fp1=open("/content/Sales.csv","r") data=fp1.readline()
while(True):

```

```

        data=fp1.readline()          if not data:
break;          #print(data)
data=data.replace("\n","")
temp=data.split(",")
product_details.append(temp[1])
customer_details.append(temp[3])
supplier_details.update({temp[0]:temp[2]})
gender.update({temp[3]:temp[4]})
fp1.close()
#print(type(customer_details))
customer_details=tuple(customer_details) print(type(customer_details))

```

OUTPUT

```
<class 'tuple'>
```

Product_details

```

['Lenovo Laptop', 'Samsung M31', 'Realmi 10pro', 'Oppo F21', 'Lenovo
Laptop', 'Samsung M31', '"LG TV 32"', 'Oppo F21', 'Lenovo Laptop',
'Samsung M31', '"LG TV 32"', 'Lenovo Laptop', 'Samsung M31',
'Realmi 10pro', 'Lenovo Laptop', 'Oppo F21', '"LG TV 32"', 'Lenovo
Laptop', 'Samsung M31', '"LG TV 32"']

```

Customer_details

```

('Kaustubh Mahajan', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Yash Mali',
'Yash Bagul', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Kaustubh Mahajan',
'Yash Mali', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Kaustubh Mahajan',
'Yash Mali', 'Siddhi Kiwale', 'Tanuja Mali', 'Kaustubh Mahajan', 'Sanket
Kandalkar', 'Siddhi Kiwale', 'Kaustubh Mahajan', 'Yash Mali')

```

Supplier_details

```

{'P00001': 'Raka Ele.', 'P00002': 'Vijay Sales', 'P00003': 'Gada
Ele.', 'P00004': 'Surya Ele.', 'P00005': 'Raka Ele.', 'P00006': 'Gada
Ele.', 'P00007': 'Vijay Sales', 'P00008': 'Surya Ele.', 'P00009': 'Raka
Ele.', 'P00010': 'Gada Ele.', 'P00011': 'Surya Ele.', 'P00012': 'Raka
Ele.', 'P00013': 'Surya Ele.', 'P00014': 'Raka Ele.', 'P00015': 'Gada
Ele.', 'P00016': 'Vijay Sales', 'P00017': 'Deshmukh sales', 'P00018':
'Raka Ele.', 'P00019': 'Deshmukh sales', 'P00020': 'Gada Ele.'}

```

Gender_details

```

{'Kaustubh Mahajan': 'Male', 'Siddhi Kiwale': 'Female', 'Sanket
Kandalkar': 'Male', 'Yash Mali': 'Male', 'Yash Bagul': 'Male', 'Tanuja
Mali': 'Female'}

```

1.Find the most popular product for sale

```
frequency = {}#{lenovo Laptop:3}
# iterating over the list for
item in product_details:
    # checking the element in dictionary
if item in frequency:
#incrementing the counter
    frequency[item] += 1    else:
    # initiating the count    frequency[item] = 1 # printing the
frequency print(frequency) marklist = sorted(frequency.items(),
key=lambda x:x[1],reverse=True) sortdict = dict(marklist)
print(sortdict) print("the most popular product for
sales",list(sortdict.keys())[0],"sold",list(sortdict.values())[0],"time
s")
```

OUTPUT

```
{'Lenovo Laptop': 6, 'Samsung M31': 5, 'Realmi 10pro': 2, 'Oppo F21':
3, '"LG TV 32"'': 4}
{'Lenovo Laptop': 6, 'Samsung M31': 5, '"LG TV 32"'': 4, 'Oppo F21':
3, 'Realmi 10pro': 2} the most popular product for
sales Lenovo Laptop sold 6 times
```

2.Find the best supplier for sales

```
frequency={}
#iterating over the list for item in
supplier_details.values(): #checking
the elements in dictionary if item
in frequency:    #incrementing the
counter        frequency[item]+=1    else:

    #intializing the count
frequency[item]=1    #printing
the frequency
print(frequency)
    marklist = sorted(frequency.items(), key=lambda x:x[1],reverse=True)
sortdict = dict(marklist) print(sortdict)
```

```
print("the most popular Supplier for
sales",list(sortdict.keys())[0],"sold",list(sortdict.values())[0],"time
s")
```

OUTPUT

```
{'Raka Ele.': 1}
{'Raka Ele.': 1, 'Vijay Sales': 1}
{'Raka Ele.': 1, 'Vijay Sales': 1, 'Gada Ele.': 1}
{'Raka Ele.': 1, 'Vijay Sales': 1, 'Gada Ele.': 1, 'Surya Ele.': 1}
{'Raka Ele.': 2, 'Vijay Sales': 1, 'Gada Ele.': 1, 'Surya Ele.': 1}
{'Raka Ele.': 2, 'Vijay Sales': 1, 'Gada Ele.': 2, 'Surya Ele.': 1}
{'Raka Ele.': 2, 'Vijay Sales': 2, 'Gada Ele.': 2, 'Surya Ele.': 1}
{'Raka Ele.': 2, 'Vijay Sales': 2, 'Gada Ele.': 2, 'Surya Ele.': 2}
{'Raka Ele.': 3, 'Vijay Sales': 2, 'Gada Ele.': 2, 'Surya Ele.': 2}
{'Raka Ele.': 3, 'Vijay Sales': 2, 'Gada Ele.': 3, 'Surya Ele.': 2}
{'Raka Ele.': 3, 'Vijay Sales': 2, 'Gada Ele.': 3, 'Surya Ele.': 3}
{'Raka Ele.': 4, 'Vijay Sales': 2, 'Gada Ele.': 3, 'Surya Ele.': 3}
{'Raka Ele.': 4, 'Vijay Sales': 2, 'Gada Ele.': 3, 'Surya Ele.': 4}
{'Raka Ele.': 5, 'Vijay Sales': 2, 'Gada Ele.': 3, 'Surya Ele.': 4}
{'Raka Ele.': 5, 'Vijay Sales': 2, 'Gada Ele.': 4, 'Surya Ele.': 4}
{'Raka Ele.': 5, 'Vijay Sales': 3, 'Gada Ele.': 4, 'Surya Ele.': 4}
{'Raka Ele.': 5, 'Vijay Sales': 3, 'Gada Ele.': 4, 'Surya Ele.': 4,
'Deshmukh sales': 1}
{'Raka Ele.': 6, 'Vijay Sales': 3, 'Gada Ele.': 4, 'Surya Ele.': 4,
'Deshmukh sales': 1}
{'Raka Ele.': 6, 'Vijay Sales': 3, 'Gada Ele.': 4, 'Surya Ele.': 4,
'Deshmukh sales': 2}
{'Raka Ele.': 6, 'Vijay Sales': 3, 'Gada Ele.': 5, 'Surya Ele.': 4,
'Deshmukh sales': 2}
{'Raka Ele.': 6, 'Gada Ele.': 5, 'Surya Ele.': 4, 'Vijay Sales': 3,
'Deshmukh sales': 2} the most popular Supplier for
sales Raka Ele. sold 6 times
```

3.Find the customer who buys most of the products

```

frequency={}
#iterating over the list for
item in customer_details:
    #checking the elements in dictionary
    if item in frequency:
        #incrementing the counter
        frequency[item]+=1    else:
            #intializing the count    frequency[item]=1 #printing the
            frequency print(frequency) marklist = sorted(frequency.items(),
            key=lambda x:x[1],reverse=True)

sortdict = dict(marklist) print(sortdict) print("the customer who buys
most of the
products",list(sortdict.keys())[0],"buy",list(sortdict.values())[0],"It
ems")

```

OUTPUT

```

{'Kaustubh Mahajan': 5, 'Siddhi Kiwale': 5, 'Sanket Kandalkar': 4,
'Yash Mali': 4, 'Yash Bagul': 1, 'Tanuja Mali': 1}
{'Kaustubh Mahajan': 5, 'Siddhi Kiwale': 5, 'Sanket Kandalkar': 4,
'Yash Mali': 4, 'Yash Bagul': 1, 'Tanuja Mali': 1} the customer
who buys most of the products Kaustubh Mahajan buy 5 Items

```

4.Find the number of customers who are 'Female'

```
#Identify Unique Customer from
collections import Counter counter=
dict(Counter(customer_details))
names=list(counter.keys()) print(names)
male=0 female=0 for name in names:
    if gender[name]=="Male":
        male+=1    if
gender[name]=="Female":
    female+=1
print("Total no of Male",male) print("Total
no of Female",female)
```

OUTPUT

```
['Kaustubh Mahajan', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Yash
Mali', 'Yash Bagul', 'Tanuja Mali']
Total no of Male 4
Total no of Female 2
```