Assignment 2

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Question:-

Prepare/Take datasets for any real-life application. For Ex. Sales of the company. Read the data from Sales.csv/.xls/.txt. Store Product details in the List data structure. Store Supplier Details in Dictionary Data Structure. Store Customer Details in Tuple Data Structure. Now perform the following operations:

1. Find the most popular product for sale.
2. Find the best supplier for sales.
3. Find the customer who buys most of the products.
4. Find the number of customers who are 'Female'

	A	B	C	D	E
1	Product ID	Product details	Supplier Details	Customer Details	Gender
2	P00001	Lenovo Laptop	Raka Ele.	Kaustubh Mahajar	Male
3	P00002	Samsung M31	Vijay Sales	Siddhi Kiwale	Female
4	P00003	Realmi 10pro	Gada Ele.	Sanket Kandalkar	Male
5	P00004	Oppo F21	Surya Ele.	Yash Mali	Male
6	P00005	Lenovo Laptop	Raka Ele.	Yash Bagul	Male
7	P00006	Samsung M31	Gada Ele.	Siddhi Kiwale	Female
8	P00007	LG TV 32"	Vijay Sales	Sanket Kandalkar	Male
9	P00008	Oppo F21	Surya Ele.	Kaustubh Mahajar	Male
10	P00009	Lenovo Laptop	Raka Ele.	Yash Mali	Male
11	P00010	Samsung M31	Gada Ele.	Siddhi Kiwale	Female
12	P00011	LG TV 32"	Surya Ele.	Sanket Kandalkar	Male
13	P00012	Lenovo Laptop	Raka Ele.	Kaustubh Mahajar	Male
14	P00013	Samsung M31	Surya Ele.	Yash Mali	Male
15	P00014	Realmi 10pro	Raka Ele.	Siddhi Kiwale	Female
16	P00015	Lenovo Laptop	Gada Ele.	Tanuja Mali	Female
17	P00016	Oppo F21	Vijay Sales	Kaustubh Mahajar	Male
18	P00017	LG TV 32"	Deshmukh sales	Sanket Kandalkar	Male
19	P00018	Lenovo Laptop	Raka Ele.	Siddhi Kiwale	Female
20	P00019	Samsung M31	Deshmukh sales	Kaustubh Mahajar	Male
21	P00020	LG TV 32"	Gada Ele.	Yash Mali	Male

Code and Output :-

```python
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()

customer_details=tuple(customer_details)
print(type(customer_details))

print("\nProduct Details\n",product_details,end="")
print("\nCustomer Details\n",customer_details,end="")
print("\nSupplier Details\n",supplier_details,end="")
print("\nGender Details\n",gender,end="")


frequency={}
#iterating over the list
for item in product_details:
  #checking the element in dictionary
  if item in frequency:
    #increment the counter
    frequency[item] += 1
    #
  else:
    frequency[item]=1


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 :

```
<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\n', 'Siddhi Kiwale': 'Female\n', 'Sanket
Kandalkar': 'Male\n', 'Yash Mali': 'Male\n', 'Yash Bagul': 'Male\n',
'Tanuja Mali': 'Female\n'}{'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
```

Code :

```python
frequency={}

for item in supplier details.values():
  if item in frequency:
    frequency[item] += 1
  else:
    frequency[item] = 1
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.': 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
```

Code :

```python
frequency={}

for item in product details:
  if item in frequency:
    frequency[item] += 1
  else:
    frequency[item] = 1
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
```

Code:

```python
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":
```

```python
print("Total no. of Males",male)
print("Total no. of Females",female)
```

Output:

```
['Kaustubh Mahajan', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Yash Mali',
'Yash Bagul', 'Tanuja Mali']
Total no. of Males 0
Total no. of Females 0
```

```python
if gender[name]=="Female":
  male=male+1
      female+=1
```