Assignment 2B

Name: Anveshika Singh

Roll no:604

Division: F

Batch: F1

Prn:202201050053

1. **Read CSV into Python data structure**

   Program-

```
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;
  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("\nProduct_details\n",product_details,end="")
print("\n\nCustomer_details\n",customer_details,end="")
print("\n\nSupplier_details\n",supplier_details,end="")
print("\n\nGender_details\n",gender,end="")
```

Output-

Product_details
['Lenovo Laptop', 'Samsung M31', 'Realme 10 Pro', 'Oppo F21', 'Lenovo Laptop', 'Samsung M31', '"LG TV 32"""', 'Oppo F21', 'Lenovo Laptop', 'Samsung M31', '"LG TV 32"""', 'Lenovo Laptop', 'Samsung M31', 'Realme 10 Pro', 'Lenovo Laptop', 'Oppo F21', '"LG TV 32"""', 'Lenovo Laptop', 'Samsung M31', '"LG TV 32"""']

Customer_details
('Kaustubh Mahajan', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Yash Mali', 'Ankit Borkar', '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 Elec.', 'P00002': 'Vijay Sales', 'P00003': 'Gada Elec.', 'P00004': 'Surya Elec.', 'P00005': 'Raka Elec.', 'P00006': 'Gada Elec.', 'P00007': 'Vijay Sales', 'P00008': 'Surya Elec.', 'P00009': 'Raka Elec.', 'P00010': 'Gada Elec.', 'P00011': 'Surya Elec.', 'P00012': 'Raka Elec.', 'P00013': 'Surya Elec.', 'P00014': 'Raka Elec.', 'P00015': 'Gada Elec.', 'P00016': 'Vijay Sales', 'P00017': 'Deshmukh Sales', 'P00018': 'Raka Elec.', 'P00019': 'Deshmukh Sales', 'P00020': 'Gada Elec.'}

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

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2. Find the most popular product for sales-

Program-

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

3. **Find the best supplier for sales**

Program-

```
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 best supplier for
sales",list(sortdict.keys())[0],"sold",list(sortdict.values())[0],"item
s")
```

Output-

```
{'Raka Elec.': 6, 'Vijay Sales': 3, 'Gada Elec.': 5, 'Surya Elec.': 4,
'Deshmukh Sales': 2}
{'Raka Elec.': 6, 'Gada Elec.': 5, 'Surya Elec.': 4, 'Vijay Sales': 3,
'Deshmukh Sales': 2}
The best supplier for sales Raka Elec. sold 6 items
```

4. **Find the customer who buys most of the products**

Program-

```
frequency={}
for item in customer_details:
  if item in frequency:
    frequency[item]+=1
  else:
    frequency[item]=1
print("Frequency is as below:\n",frequency)
marklist=sorted(frequency.items(),key=lambda x:x[1],reverse=True)
sortdict=dict(marklist)
print("\nSorted dict is as below:\n",sortdict)
print("\n\nThe customer who buys most of the
products",list(sortdict.keys())[0],"buy",list(sortdict.values())[0],"it
ems")
```

Output-

```
Frequency is as below:
 {'Kaustubh Mahajan': 5, 'Siddhi Kiwale': 5, 'Sanket Kandalkar': 4,
'Yash Mali': 4, 'Ankit Borkar': 1, 'Tanuja Mali': 1}
```

```
Sorted dict is as below:
 {'Kaustubh Mahajan': 5, 'Siddhi Kiwale': 5, 'Sanket Kandalkar': 4,
'Yash Mali': 4, 'Ankit Borkar': 1, 'Tanuja Mali': 1}
```

```
The customer who buys most of the products Kaustubh Mahajan buy 5 items
```

5. **Find the number of customers who are “Female”**
   Program-

```
#pip install collections
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=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',
'Ankit Borkar', 'Tanuja Mali']
Total no. of Male= 3
Total no. of Female= 2
```