Name : Viraj Rajendra Mandlik

Roll No : 639

PRN : 2022201040102

Division : F (F2)

```
1) READ CSV INTO PYTHON DATA STRUCTURE

Product_details=[]
Supplier_details=dict()
Customer_details=[]
gender={}
fp1=open("/content/drive/MyDrive/Colab Notebooks/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(type(Customer_details))
```

Output:

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

```
#2)FIND THE MOST POPULAR PRODUCT FOR SALES

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:
      #intitalizing the count
      frequency[item]=1
      #printing the frequency
      print(frequency)
      marklist= sorted(frequency.items(),key=lambda 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],"times")
```

Output:

```
{'Lenovo Laptop': 1}
{'Lenovo Laptop': 1}
The most popular product for sales Lenovo Laptop sold 1 times
{'Lenovo Laptop': 1, 'Samsung M31': 1}
{'Lenovo Laptop': 1, 'Samsung M31': 1}
The most popular product for sales Lenovo Laptop sold 1 times
{'Lenovo Laptop': 1, 'Samsung M31': 1, 'Realmi 10pro': 1}
{'Lenovo Laptop': 1, 'Samsung M31': 1, 'Realmi 10pro': 1}
The most popular product for sales Lenovo Laptop sold 1 times
{'Lenovo Laptop': 1, 'Samsung M31': 1, 'Realmi 10pro': 1, 'Oppo F21': 1}
{'Lenovo Laptop': 1, 'Samsung M31': 1, 'Realmi 10pro': 1, 'Oppo F21': 1}
The most popular product for sales Lenovo Laptop sold 1 times
{'Lenovo Laptop': 2, 'Samsung M31': 2, 'Realmi 10pro': 1, 'Oppo F21': 1, '"LG TV 32"""': 1}
{'Lenovo Laptop': 2, 'Samsung M31': 2, 'Realmi 10pro': 1, 'Oppo F21': 1, '"LG TV 32"""': 1}
The most popular product for sales Lenovo Laptop sold 2 times
```

```
#3) FIND THE BEST SUPPLIER FOR SALES

frequency={}
#iterating over the list
for item in Supplier_details.values():
  #checking the element 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],"Items")
```

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 Items
```

```
#4 ) Find teh customer who buys most of the products.
frequency={}
#iterating over the list
for item in Customer_details:
  #checking the element in dictionary
  if item in frequency:
    #incrementing the counter
    frequency[item]+=1
  else:
      #intializing the count
      frequency[item]=1
#printing the frequency
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],"Items
")
```

Output:

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

sorted dict is as below:
 {'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
```

```
#5) 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=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= 1
Total no of Female 1
Total no of male= 4
Total no of Female 2
```