

Name : Aman Upadhye

Roll No : 663

PRN : 2022201050030

Division : F (F3)

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
```