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ROLL NO. 721
PRN NO. 2201040155
DIV: G (G1)

```
from google.colab import drive
drive.mount('/content/drive')
```

```
Mounted at /content/drive
```

```
import pandas as pd
```

```
Product_details=[]
Supplier_details=dict()
Customer_details=[]
gender={}

fp1=open("drive/My Drive/Colab Notebooks/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))
```

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

```
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="")
```

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

Customer_details
 ('Kaustubh Mahajan', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Yash Mali', 'Yash Bagul', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Kaustubh Mah

Supplier_details
 {'P00001': 'Raka Ele.', 'P00002': 'Vijay Sales', 'P00003': 'Gada Ele.', 'P00004': 'Surya Ele.', 'P00005': 'Raka Ele.', 'P00006': 'Gada

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

```
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:
      # initializing 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],"times")
```

```
{'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
```

```
from collections import Counter
counter = dict(Counter(Product_details))
sorted_counter = sorted(counter.items(), key=lambda x:x[1],reverse=True)
sorted_counter=dict(sorted_counter)
print("The most popular product for sales",list(sorted_counter.keys())[0],
      " sold ",list(sorted_counter.values())[0],"times")
```

```
The most popular product for sales Lenovo Laptop  sold  6 times
```

```
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:
      # initializing 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")
```

```
{'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
```

```
from collections import Counter
counter = dict(Counter(list(Supplier_details.values())))
sorted_counter = sorted(counter.items(), key=lambda x:x[1],reverse=True)
sorted_counter=dict(sorted_counter)
print("The most popular Supplier for sales",list(sorted_counter.keys())[0],
      " sold ",list(sorted_counter.values())[0],"Items")
```

```
The most popular Supplier for sales Raka Ele.  sold  6 Items
```

```
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:
      # initializing the count
      frequency[item] = 1
# printing the frequency
print("Freqenct 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")
```

```
Freqenct 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
```

```
from collections import Counter
counter = dict(Counter(Customer_details))
sorted_counter = sorted(counter.items(), key=lambda x:x[1],reverse=True)
sorted_counter=dict(sorted_counter)
print("The customer who buys most of the products",list(sorted_counter.keys())[0],
      " buy ",list(sorted_counter.values())[0],"Items")
```

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

```
# 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)
```

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

```
d1={"A":10,"B":9,"C":8}
d1
```

```
{'A': 10, 'B': 9, 'C': 8}
```

```
newlist=sorted(d1.items(), key=lambda x:x[0],reverse=False)
```

```
dict11=dict(newlist)
```

```
dict11
```

```
{'A': 10, 'B': 9, 'C': 8}
```

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