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PRN=202201040092

ROLL NO-635

DIV-F

BATCH=F2

Product ID	Product details	Supplier Details	Customer Details	Gender
P00001	Lenovo Laptop	Raka Ele.	Kaustubh Mahajan	Male
P00002	Samsung M31	Vijay Sales	Siddhi Kiwale Sanket	Female
P00003	Realmi 10pro	Gada Ele.	Kandalkar	Male
P00004	Oppo F21	Surya Ele.	Yash Mali	Male
P00005	Lenovo Laptop	Raka Ele.	Yash Bagul	Male
P00006	Samsung M31	Gada Ele.	Siddhi Kiwale Sanket	Female
P00007	LG TV 32"	Vijay Sales	Kandalkar Kaustubh Mahajan	Male
P00008	Oppo F21	Surya Ele.	Yash Mali	Male
P00009	Lenovo Laptop	Raka Ele.	Yash Mali	Male
P00010	Samsung M31	Gada Ele.	Siddhi Kiwale Sanket	Female
P00011	LG TV 32"	Surya Ele.	Kandalkar Kaustubh Mahajan	Male
P00012	Lenovo Laptop	Raka Ele.	Yash Mali	Male
P00013	Samsung M31	Surya Ele.	Yash Mali	Male
P00014	Realmi 10pro	Raka Ele.	Siddhi Kiwale	Female
P00015	Lenovo Laptop	Gada Ele.	Tanuja Mali Kaustubh Mahajan	Female
P00016	Oppo F21	Vijay Sales Deshmukh sales	Sanket Kandalkar	Male
P00017	LG TV 32"	Lenovo	Kandalkar	Male
P00018	Laptop	Raka Ele. Deshmukh sales	Siddhi Kiwale Kaustubh Mahajan	Female
P00019	Samsung M31	sales	Yash Mali	Male
P00020	LG TV 32"	Gada Ele.	Yash Mali	Male

(1) INPUT

```
Product_details=[]
```

```
Supplier_details=dict()
```

```
Customer_details=[] #tuple
```

```
gender={}
```

```

fp1=open("/content/Sales (5).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])
    Supplier_details.update({temp[0]:temp[2]})
    Customer_details.append(temp[3])
    gender.update({temp[3]:temp[4]})

fp1.close()
#print(type(customer_details))
Customer_details=tuple(Customer_details)
print(type(Customer_details))

print("\n Product_details\n",Product_details,end="")
print("\n Customer_details\n",Customer_details,end="")
print("\n Supplier_details\n",Supplier_details,end="")
print("\n Gender_details\n",gender,end="")

```

## 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', 'Siddhi Kiwale': 'Female', 'Sanket
Kandalkar': 'Male', 'Yash Mali': 'Male', 'Yash Bagul': 'Male', 'Tanuja
Mali': 'Female'}
```

(2) INPUT #to find most popular products for saales

```
frequency = {}#(lenovo laptop:3)
#iterating over the list
for item in Product_details:
    #checking the elements in dictionary
    if item in frequency:
        #incrementing the counter
        frequency[item] += 1
    else:
        #initializing the frequency
        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],"items")
```

## 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 items
```

(3)INPUT # 3 find the best supplier for sales

```
frequency ={}
#iterating over the list
for item in Supplier_details:
    #checking the elements in dictionary
    if item in frequency:
        #incrementing the counter
        frequency[item] += 1
```

```

    else:
        #initializing the frequency
        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

```

{'P00001': 1, 'P00002': 1, 'P00003': 1, 'P00004': 1, 'P00005': 1,
'P00006': 1, 'P00007': 1, 'P00008': 1, 'P00009': 1, 'P00010': 1, 'P00011':
1, 'P00012': 1, 'P00013': 1, 'P00014': 1, 'P00015': 1, 'P00016': 1,
'P00017': 1, 'P00018': 1, 'P00019': 1, 'P00020': 1}
{'P00001': 1, 'P00002': 1, 'P00003': 1, 'P00004': 1, 'P00005': 1,
'P00006': 1, 'P00007': 1, 'P00008': 1, 'P00009': 1, 'P00010': 1, 'P00011':
1, 'P00012': 1, 'P00013': 1, 'P00014': 1, 'P00015': 1, 'P00016': 1,
'P00017': 1, 'P00018': 1, 'P00019': 1, 'P00020': 1}

```

```

#(4)INPUT find the customer who buys most of the products
frequency={}
#iterating over the list
for item in Customer_details:
    #checking the elements in dictionary
    if item in frequency:
        #incrementing the counter
        frequency[item] += 1
    else:
        #initializing the frequency
        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

```
{'Kaustubh Mahajan': 5, 'Siddhi Kiwale': 5, 'Sanket Kandalkar': 4, 'Yash  
Mali': 4, 'Yash Bagul': 1, 'Tanuja Mali': 1}  
{'Kaustubh Mahajan': 5, 'Siddhi Kiwale': 5, 'Sanket Kandalkar': 4, 'Yash  
Mali': 4, 'Yash Bagul': 1, 'Tanuja Mali': 1}  
the most popular supplier for sales Kaustubh Mahajan sold 5 items
```

```
#(5)INPUT find the number of customer 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 +=1  
    if gender[name]=="Female":  
        female +=1  
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 4  
total no of females 2
```