ASSIGNMENT 2A

```
#create a dictionary to store employee record
D = {'name': 'Bob',
     'age': 25,
     'job': 'Dev',
     'city': 'New york',
     'email': 'bb@web.com'}

#create a dictionary with a list of two-item tuples
L = [('name','Bob'),
     ('age', 25),
     ('job','Dev')]
D = dict(L)
print(D)
# Prints {'name':'Bob','age': 25,'job':'Dev'}

#create a dictionary with a tuple of two-item lists
T=(['name','Bob'],
   ['age',25],
   ['job','dev'])
D=dict(T)
print(D)

#create dictionary with list of zipped keys/values
keys = ['name','age','job']
values = ['Bob',25,'Dev']

D = dict(zip(keys,values))

print(D)
# Prints{'name':Bob','age':25,'job':'Dev'}

#Initialize dictionary with default value '0' for each key
```

```
keys = ['a','b','c']
defaultvalue = 0

D = dict.fromkeys(keys,defaultvalue)

print(D)

D={'name':'Bob',
   'age': 25,
   'name':'Jane'}
print(D)

#Immutable type

D = {(2,2): 25,
     True: 'a',
     'name': 'Bob'}
#values of different datatypes
D = {'a':[1,2,3],
     'b':[1,2,3]}

#duplicate values
D = {'a':[1,2],
     'b':[1,2],
     'c':[1,2]}

#Add or update dictionary items
D = {'name':'Bob',
     'age':25,
     'job':'Dev'}

D['name']='Sam'
print(D)

#merge 2 dictionaries

D1 = {'name':' Bob',
      'age':25,
      'job':'Dev'}
D2 = {'age':30,
      'city': 'New york',
      'email':'bob@web.com'}
D1.update(D2)
print(D1)
```

```
#Remove dictionary items
D = {'name':'Bob',
     'age': 25,
     'job':'Dev'}

x = D.pop('age')
print(D)

#remove all items
D = {'name':'Bob',
     'age': 25,
     'job':'Dev'}

D.clear()
print(D)


D = {'name':'Bob',
     'age': 25,
     'job':'Dev'}

#get all keys
print(list(D.keys()))

#get all values
print(list(D.values()))

#get all pairs
print(list(D.items()))
```

OUTPUT:

```
{'name': 'Bob', 'age': 25, 'job': 'Dev'}
{'name': 'Bob', 'age': 25, 'job': 'dev'}
{'name': 'Bob', 'age': 25, 'job': 'Dev'}
{'a': 0, 'b': 0, 'c': 0}
{'name': 'Jane', 'age': 25}
{'name': 'Sam', 'age': 25, 'job': 'Dev'}
{'name': ' Bob', 'age': 30, 'job': 'Dev', 'city': 'New york', 'email': 'bob@web.com'}
{'name': 'Bob', 'job': 'Dev'}
{}
['name', 'age', 'job']
['Bob', 25, 'Dev']
[('name', 'Bob'), ('age', 25), ('job', 'Dev')]
```

ASSIGNMENT 2B

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

fp1=open("/content/sample_data/Sales1.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()
#print(type(Customer_details))
Customer_details=tuple(Customer_details)
print(type(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="")


#3 find 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:
    #initializing the count
    frequency[item] = 1
#printing the frequncy
print(frequency)
marklist = sorted(frequency.items(),key=lambda x:x[1],reverse=True)
sortdict = dict(marklist)
print(sortdict)
print("The most popular for
sales",list(sortdict.keys())[0],"sold",list(sortdict.values())[0],"times")


#or

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")

#4 find the 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:
    #initializing 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
")

#5 find the no. 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=male+1
  if gender[name]=="Female":
    female=female+1
print("Total no of Male=",male)
print("Total no of Female=",female)
```

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'}{'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 for sales Lenovo Laptop sold 6 times

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

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
['Kaustubh Mahajan', 'Siddhi Kiwale', 'Sanket Kandalkar', 'Yash Mali',
'Yash Bagul', 'Tanuja Mali']

Total no of Male= 4

Total no of Female= 2
```