Python Programming Lab

Practical no. 4

Topic Covered: Dictionary and Function

1. Consider the information given below and answer the following question. Employee_data = { 101:['Shiva', 24, 'Content Strategist'] ,102:['Udit',25,'Content Strategist'], 103:['Sonam', 28,'Sr Manager'], 104:['Ansari',29,'Product Lead'],105:['Huzefa',32,'Project Manager']}

   a. Get details of the oldest Employee

In [2]:
```
Employee_data={101:['Shiva',24,'Content Strategist'],102:['Udit',25,'Content S
print(Employee_data[105])
```

```
['Huzefa', 32, 'Project Manager']
```

b. Identify the age of the employee with employee id 159 [If the employee isn't present return NA]

In [3]:
```
if 159 in Employee_data:
    print(Employee_data[159])
else:
    print("NA")
```

```
NA
```

c. Count the total number of employees in the organization

In [4]:
```
count=len(Employee_data)
print("Total number of employees in the organasization: ",count)
```

```
Total number of employees in the organasization:  5
```

d. Calculate the mean age of the employees

In [18]:
```
m=0
for i in range(101,106):
    m=m+Employee_data[i][1]
mean=m/len(Employee_data)
print("Maen age of employees: ",mean)
```

```
Maen age of employees:  19.428571428571427
```

e. Perform the following two tasks and then calculate the updated mean age of the employees.Update the ages of employee id - 104,140, and 164 as 27

In [17]:
```
Employee_data[104][1]=27
Employee_data[140]=['Saloni',27,'Dancer']
Employee_data[164]=['Aman',27,'Dancer']
print("Age of employee id 104: ",Employee_data[104][1])
print("Age of employee id 140: ",Employee_data[140][1])
print("Age of employee id 164: ",Employee_data[164][1])
print(Employee_data)
```

```
Age of employee id 104:  27
Age of employee id 140:  27
Age of employee id 164:  27
{101: ['Shiva', 24, 'Content Strategist'], 102: ['Udit', 25, 'Content Strateg
ist'], 103: ['Sonam', 28, 'Sr Manager'], 104: ['Saloni', 27, 'Dancer'], 105:
['Huzefa', 32, 'Project Manager'], 164: ['Aman', 27, 'Dancer'], 140: ['Saloni
', 27, 'Dancer']}
```

In [12]:
```
m=0
for i in range(101,106):
    m=m+Employee_data[i][1]
mean=(m+Employee_data[140][1]+Employee_data[164][1])/len(Employee_data)
print("Updated mean age of the employees:",mean)
```

```
Updated mean age of the employees: 27.142857142857142
```

2. Create a SORTED list of all values from the dictionary input_dict = {'Jack Dorsey' : 'Twitter' , 'Tim Cook' : 'Apple', 'Jeff Bezos' : 'Amazon' , 'Mukesh Ambani' : 'RJIO'} Sample Output: ['Amazon', 'Apple', 'RJIO', 'Twitter']

In [13]:
```
input_dict={'Jack Dorsey':'Twitter','Tim Cook':'Apple','Jeff Bezos':'Amazon','
for item in input_dict.items():
    print(item)
print(list(sorted(input_dict.values())))
```

```
('Jack Dorsey', 'Twitter')
('Tim Cook', 'Apple')
('Jeff Bezos', 'Amazon')
('Mukesh Ambani', 'RJIO')
['Amazon', 'Apple', 'RJIO', 'Twitter']
```

3. Scenario: You are the manager of a supermarket. You have a list of items together with their prices that consumers bought on a particular day. Your task is to print each item_name and net_price. item_name = Name of the item. net_price = Quantity of the item sold multiplied by the price of each item.

Input Format
The first line contains the number of items The next lines contains the item's name and price, separated by a space.

Constraint
0<n<=100

Output Format####
Print the item_name and net_price in order

Sample####

In [ ]:
```
print("Enter the number of items: ")
n=int(input())
items_dict=dict()
for i in range(n):
  print("Enter item i: ",i+1)
  item=input()
  item_name,item_price=item.split(' ')
  item_price=int(item_price)
  if(item_name in items_dict):
    items_dict[item_name]+=item_price
  else:
    items_dict[item_name]=item_price
print("Items and their net price are : ")
for keys in items_dict:
  print(keys,items_dict[keys])
```

4. Create a Nested Dictionary Using the given table in the format: Olympic = {County1 : {Country Code-1 : {Gold : value , Silver : value Bronze:value} },

County2 : {Country Code-2 : {Gold : value , Silver : value , Bronze : value} }, ….}

Country || Country Code ||Year ||Medal-Gold|| Medal-Silver || Medal- Bronze

Great Britain || GBR ||2012 || 29 || 17 || 19

China || CHN || 2012 || 38 || 28 || 22

Russia || RUS || 2012 || 24 || 25 || 32

United States|| US || 2012 || 46 || 28 || 29

Korea || KOR || 2012 || 13 || 8 || 7

Japan || JPN || 2012 || 7 || 14 || 17

Germany || GER || 2012 || 11 || 11 || 14

Olympic={'Great Britain':{'GBR':{'Gold':27,'Silver':17,'Bronze':19}},'China':{'CHN': {'Gold':38,'Silver':28,'Bronze':22}},'Russia':{'RUS':{'Gold':24,'Silver':25,'Bronze':32}},'United States':{'US':{'Gold':46,'Silver':28,'Bronze':29}}, 'Korea':{'KOR': {'Gold':13,'Silver':8,'Bronze':7}},'Japan':{'JPN':{'Gold':7,'Silver':14,'Bronze':17}},'Germany': {'GER':{'Gold':11,'Silver':11,'Bronze':14}}} print(Olympic)

a.Find the country with maximum gold medals

In [34]:
```
print("Country with maximum gold medals: ",Olympic['Great Britain'])
```

```
Country with maximum gold medals:  {'GBR': {'Gold': 27, 'Silver': 17, 'Bronze
': 19}}
```

In [35]:
```
print(Olympic.get('Great Britain'))
print(Olympic.values())
```

```
{'GBR': {'Gold': 27, 'Silver': 17, 'Bronze': 19}}
dict_values([{'GBR': {'Gold': 27, 'Silver': 17, 'Bronze': 19}}, {'CHN': {'Gol
d': 38, 'Silver': 28, 'Bronze': 22}}, {'RUS': {'Gold': 24, 'Silver': 25, 'Bro
nze': 32}}, {'US': {'Gold': 46, 'Silver': 28, 'Bronze': 29}}, {'KOR': {'Gold
': 13, 'Silver': 8, 'Bronze': 7}}, {'JPN': {'Gold': 7, 'Silver': 14, 'Bronze
': 17}}, {'GER': {'Gold': 11, 'Silver': 11, 'Bronze': 14}}])
```

b. Find the countries with more than 20 gold medals

In [ ]:
```

```

c. Evaluate the Dictionary and print the name of each country with its gold medals and total number of medals

In [ ]:
```

```

5. Write a Python Program to Count the Number of Each Vowel, consonants and spaces in the given String(Multiline) using Dictionary (Use V_dict for vowels and C_dict for consonants and spaces)

In [33]:
```
str = input( "Enter the string=" )
vowels = 0
consonants = 0

str = str.lower()
for i in range(0, len(str)):
      if(str[i] == 'a' or str[i] == 'e' or str[i] == 'i'
          or str[i] == 'o' or str[i] == 'u'):
          vowels = vowels + 1
      elif((str[i] >= 'a'and str[i] <= 'z')):
          consonants = consonants + 1

print("Vowels=", vowels)
print("Consonants=", consonants)
```

```
Enter the string=why are you reading this?
Vowels= 8
Consonants= 12
```

In [36]:
```
emailId=[]
Dict={}
for i in range(5):
   print("Enter Full Name")
   fname=str(input())
   first,middle,last=fname.split(' ')
   emailId.append(last.lower()+first[0].lower()+middle[0].lower()+"@rknec.edu"
   print("Email ID is",emailId[i])
   Dict[i]=emailId[i]
print(Dict)
```

```
Enter Full Name
Saloni Vinod Vishwakarma

---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_18780\119536329.py in <module>
      3 for i in range(5):
      4    print("Enter Full Name")
----> 5    fname=str(input())
      6    first,middle,last=fname.split(' ')
      7    emailId.append(last.lower()+first[0].lower()+middle[0].lower()+"@r
knec.edu")

TypeError: 'str' object is not callable
```

In [ ]: