**Name: Reshma K S**

**Roll No: 27**

**Batch: B**

**Date: 11-08-2022**

**DATA SCIENCE LAB**

**Experiment No.: 2**

**Aim**

Q2 Dataframe

1. create Dataframe From Series

2. DataFrame from List of Dictionaries

3. Display the first 5 rows of data frame

4. Select the last two columns of the data frame

5. Add two data frames

6. Demonstrate deletion, and renaming of columns

7. Demonstrate concat, Merge operations in data frame

8. Write a Pandas program to join the two given dataframes along rows and

assign all data

Test Data:

student\_data1:

student\_id name marks

0 S1 Danniella Fenton 200

1 S2 Ryder Storey 210

2 S3 Bryce Jensen 190

3 S4 Ed Bernal 222

4 S5 Kwame Morin 199

student\_data2:

student\_id name marks

0 S4 Scarlette Fisher 201

1 S5 Carla Williamson 200

2 S6 Dante Morse 198

3 S7 Kaiser William 219

4 S8 Madeeha Preston 201

**Procedure**

Dataframe:

1.create Dataframe From Series

import pandas as pd

s = pd.Series(['a','b','c','d'])

df=pd.DataFrame(s)

print(df)

**Output**

  0

0  a

1  b

2  c

3  d

2. DataFrame from List of Dictionaries

import pandas as pd

l = [{'name':'sachin','sirname':'bhardwaj'},

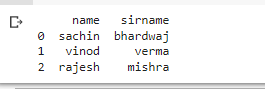
   {'name':'vinod','sirname':'verma'},

   {'name':'rajesh','sirname':'mishra'}]

df1=pd.DataFrame(l)

print(df1)

**Output**



3. Display the first 5 rows of data frame

import pandas as pd

m = [{'name':'sachin','sirname':'bhardwaj'},

   {'name':'vinod','sirname':'verma'},

   {'name':'rajesh','sirname':'mishra'},

   {'name':'ran','sirname':'mira'},

   {'name':'ram','sirname':'mia'},

   {'name':'mesh','sirname':'kashra'}]

df2=pd.DataFrame(m)

print(df1)

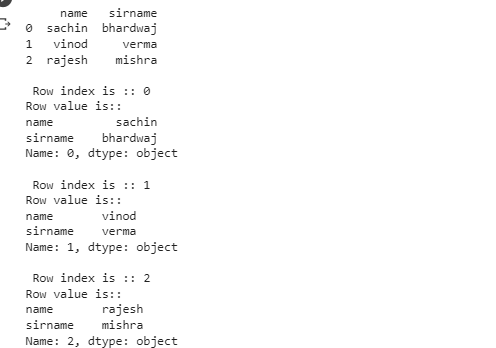
for(row\_index,row\_value) in df2.iterrows():

  print('\n Row index is ::',row\_index)

  print('Row value is::')

  print(row\_value)

**Output**



4. Select the last two columns of the data frame

import pandas as pd

l = [{'name':'sachin','sirname':'bhardwaj'},

   {'name':'vinod','sirname':'verma'}]

df3=pd.DataFrame(l)

print(df3)

for(col\_name,col\_value) in df3.iteritems():

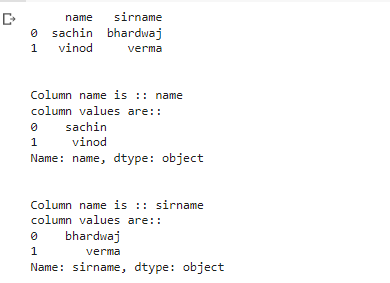
  print('\n')

  print('Column name is ::',col\_name)

  print('column values are::')

  print(col\_value)

**Output**



5. Add two data frames

import pandas as pd

g = pd.Series([10,15,18,22])

df=pd.DataFrame(g)

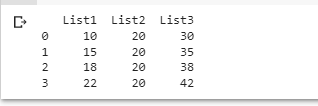
df.columns=['List1']

df['List2']=20

df['List3']=df['List1']+df['List2']

print(df)

**Output**



6. Demonstrate deletion, and renaming of columns

import pandas as pd

g = pd.Series([10,15,18,22])

df=pd.DataFrame(g)

df.columns=['List1']

df['List2']=20

df['List3']=df['List1']+df['List2']

del df['List3']

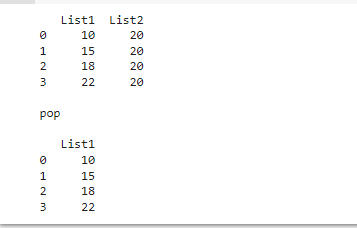
print(df)

print('\npop\n')

df.pop('List2')

print(df)

**Output**



7. Demonstrate concat, Merge operations in data frame

import pandas as pd

dict1={'id':['1','2','3','4','5'],'value1':['A','C','E','G','I'],

       'value2':['B','D','F','H','J']}

dict2={'id':['2','3','6','7','8'],'value1':['K','M','O','Q','S'],

       'value2':['L','N','P','R','T']}

dict3={'id':['2','3','1','7','8','9','1','4','5','0'],

       'value3':['cA','ra','Ka','Ma','Oa','Qa','ta','ja','ea','Sa']}

df1=pd.DataFrame(dict1)

df2=pd.DataFrame(dict2)

df3=pd.concat([df1,df2])

print("..........concat........\n", df3)

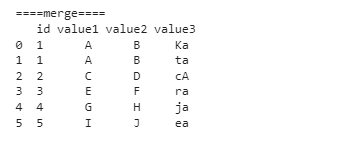
df4=pd.DataFrame(dict3)

print("\ndict4 = \n",df4)

df5=pd.merge(df1,df4,on='id')

print("\n\n====merge====\n",df5)

**Output**



8. Write a Pandas program to join the two given dataframes along rows and assign all data

import pandas as pd

df6.to\_csv('output.csv')

data=pd.read\_csv('output.csv')

data

**Output**

