Ex.No-4 **DataLoadingandStoring**

LOADING

Aim:

Toreadexcel/csv/textfilesandextracttherelevantinformation

Description:

1. Readanddisplaytheexcelfiledata
2. ThroughDataFramegetthedetailsofcolumnheadings
3. ThroughDataFramegetthedetailsoftheshapeofExceltable
4. ThroughDataFramegettheparticularcolumnvalues
5. ThroughDataFrameextract/slicetheExceltablevalues
6. ThroughDataFramegettheparticularrowvalues
7. ThroughDataFramemakeanaverageofparticularcolumnvalues

Program:

```
import pandas as pd
d=pd.read_csv("LAS.csv")
#Get the table data
print("Getthetabledata:\n")
print(d)
#print(d.to_string())
df=pd.DataFrame(d)
#print(df)
#Getthecolumnheading
print("\nGetthecolumnheading\n",df.columns) #Get
the shape (no.of raws.no, of columns)
print("\nGettheshape(no.ofrows,no.ofcolumns)\n",df.shape) #Get
particular column values
print("\nGetparticularcolumnvalues\n",df['roll.no'])
```

```
#Extract/slice the table values (including this row, excluding this row
print("\nExtract/slicethetablevalues-[includingthisrow,excludingthisrow]\n",df[2:5]) #Get
the particular row values through row number identification
print("\nGettheparticularrowvalues-throughrownumberidentification\n",df.loc[7]) #Get
the particular row values-through 'Roll number' identification
print("\nGettheparticularrowvalues-through'Rollnumber'identification\n",d.loc[d['roll.no']==5])
#Make an average of total mark
df=d['total']/5
print("\nMakeanaverageoftotalmarks:\n",df)
```

Output:

Getthetabledata:

	roll.no	name	maths	science	social	total
0	1	deepa	50	67	50	284
1	2	dinesh	56	89	56	346
2	3	kaviya	80	80	80	400
3	4	racheal	89	87	89	441
4	5	rajan	90	98	90	466
5	6	ramya	67	76	67	353
6	7	rohan	56	67	57	301
7	8	sandhya	58	56	58	286
8	9	saranya	49	45	49	237

Getthecolumnheading

```
Index(['roll.no','name','maths','science','social','total'],dtype='object')
```

Get the shape (no.of rows,no.of columns)

(9, 6)

Getthecolumnheading

Index(['roll.no','name','maths','science','social','total'],dtype='object')

Gettheshape(no.ofrows,no.ofcolumns) (9,

6)

Getparticularcolumnvalues

0 1

1 2

2 3

3 4

4 5

5 6

6 7

7 8

8 9

Name:roll.no,dtype:int64

Extract/slicethetablevalues-[includingthisrow,excludingthis row]

	roll.no	name	maths	science	social	total
2	3	kaviya	80	80	80	400
3	4	racheal	89	87	89	441
4	5	rajan	90	98	90	466

Gettheparticularrowvalues-throughrownumberidentification

roll.no 8

name sandhya

maths 58

science 56

social 58

total 286

Name:7,dtype:object

Get the particular row values-through 'Roll number'

identificationroll.nonamemathssciencesocialtotal

4 5rajan 90 98 90 466

Makeanaverageoftotalmarks:

0 56.8

1 69.2

2 80.0

3 88.2

4 93.2

5 70.6

6 60.2

7 57.2

8 47.4

Name:total,dtype:float64

STORING

Aim:

TostoreandmanipulateinputdatafromDataFrametoExcel/CSVthroughPandas.

Description:

1. CreateaDataFrameandstorethedataintospecifiedExcelfile
2. ToreadtwoExcelfiledataandmergethroughappendfunctionandstorethemergeddatainto the new Excel file.
3. Usingsortfunction,tosortandstoretheresultantdataintoanewExcelfile
4. ReadanddisplaytheCSVfile
5. Listthecolumnheadingsandgetthelengthofthetabledata.

Program:

```
import pandas as pd
d=pd.read_csv("LAS.csv")
df=pd.DataFrame(d)
print("OriginalDataFrame:\n",df)
#SecondDataframeinputtoanotherExcel file
d=pd.DataFrame([[20,'divya',95,85,76,256],[14,'lakshmi',90,80,58,228],[32,'ganesh',70,47,88,205]],
columns=['roll.no','name','maths','science','social','total'])
d.to_csv('pandas_to_csv.csv')
#Mergingtwo Excel files input intothirdfile
x=pd.read_csv("LAS.csv")
y=pd.read_csv('pandas_to_csv.csv')
y.drop(['Unnamed:0'],axis=1,inplace=True)
z=pd.concat([x,y],ignore_index=True)
z.to_csv('pandas_to_csv3.csv')
#Sorting the column vaules
df=z.sort_values(["roll.no"])
print("\nSorted Values:\n",df)
df.to_csv('pandas_to_csv4.csv')
df=pd.read_csv('LAS.csv')
print(list(df))
print(format(len(df)))
```

Output:

Original DataFrame:

	roll.no	name	maths	science	social	total
0	1	deepa	50	67	50	284
1	2	dinesh	56	89	56	346
2	3	kaviya	80	80	80	400
3	4	racheal	89	87	89	441
4	5	rajan	90	98	90	466
5	6	ramya	67	76	67	353
6	7	rohan	56	67	57	301
7	8	sandhya	58	56	58	286
8	9	saranya	49	45	49	237

SortedValues:

	roll.no	name	maths	science	social	total
0	1	deepa	50	67	50	284
1	2	dinesh	56	89	56	346
2	3	kaviya	80	80	80	400
3	4	racheal	89	87	89	441
4	5	rajan	90	98	90	466
5	6	ramya	67	76	67	353
6	7	rohan	56	67	57	301
7	8	sandhya	58	56	58	286
8	9	saranya	49	45	49	237
10	14	lakshmi	90	80	58	228
9	20	divya	95	85	76	256

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['roll.no','name','maths','science','social',

'total'] 9

Result:

Theprogramswererunsuccessfully