

Practise Exercise
13-Feb-18

1. Initial Data

create a list of students and their data

give rollnos from 101 onwards, first name to be in alphabetical order, gender as M/F, random marks for python & sas between 60 & 90

meena apoorva kastav shubam goldie hitesh shruti vijay achal lalit varun

List Output

rollnoL = [109, 102, 105, 106, 103, 110, 101, 107, 104, 111, 108]

nameL = ['meena', 'apoorva', 'kastav', 'shubam', 'goldie', 'hitesh', 'shruti', 'vijay', 'achal', 'lalit', 'varun']

genderL = ['F', 'F', 'M', 'M', 'M', 'M', 'F', 'M', 'M', 'M', 'M']

pythonL = np.random.randint(60, 90, 11)

sasL = np.random.randint(65, 85, 11)

Create Data Frame

Dictionary

```
studentDF1 = pd.DataFrame({'rollno':rollnoL, 'name':nameL, 'gender':genderL, 'python':pythonL, 'sas':sasL})
```

studentDF1.index = rollnoL

studentDF1

Series

```
studentDF2 = pd.concat([rollnoS, nameS, genderS, pythonS, sasS], axis=1)
```

studentDF2.column = ['rollno', 'name', 'gender', 'python', 'sas']

studentDF2

Change index to rollnos

studentDF2.index = rollnoL

studentDF2

studentDF3 = pd.DataFrame({'rollno':rollnoL, 'sname':nameL, 'gender':genderL, 'python':pythonL, 'sas':sasL}, columns=['rollno', 'sname', 'gender', 'python', 'sas'])

studentDF3a = studentDF3[['sname', 'gender', 'python']]

studentDF3.index = rollno

Dictionary List

Print values of DF as an array

Transpose the DF

Print the first row

Print only the sname column

Print the output like this

Print output like this : upto 105 rollno and col upto python as it exists in DF

Print output like this : 1-5 rows, 1-2 cols

Add another column total by summing python & sas marks and display first 5 rows

List those students who have more than 150 marks in total

Create Panda Series and perform some Operations

Print the Index & data separately

Print data in list format

edit value/name for index 108 to jain & find it has changed

List First 5 values (as 1-D array)

First item in Series

List students with roll no 103 to 110 as they have been entered in Series

Name for rollno 108

nameS = pd.Series(nameL, index=rollnoL)

nameS

nameS.index = rollnoL

112 in nameS

111 in nameS

nameS.keys()

nameS.index

nameS.items

nameS.values

list(nameS.items())

nameS[108]='jain'

nameS[nameS == "jain"]

nameS[nameS == 108] # wrong

nameS[0:5]

nameS[101:106] # nothing

nameS.iloc[0:5]

nameS.iloc[0]

nameS.loc[0] # error no such label

nameS[nameS='meena']

nameS[0:1]

nameS.loc[103:110]

nameS.loc[108]

nameS.ix[108] # being depreciated