# Creation of python programs to handle missing data

import pandas as pd

# importing numpy as np

import numpy as np

# dictionary of lists

dict = {'First Score':[100, 90, np.nan, 95],

'Second Score': [30, 45, 56, np.nan],

'Third Score':[np.nan, 40, 80, 98]}

# creating a dataframe from list

df = pd.DataFrame(dict)

# using isnull() function

df.isnull()

# Filling missing values using fillna(), replace() and interpolate()

df.fillna(0)

df.fillna(method ='pad')

## Dropping missing values using dropna()

import pandas as pd

# importing numpy as np

import numpy as np

# dictionary of lists

dict = {'First Score':[100, 90, np.nan, 95],

'Second Score': [30, np.nan, 45, 56],

'Third Score':[52, 40, 80, 98],

'Fourth Score':[3, np.nan, np.nan, 65]}

# creating a dataframe from dictionary

df = pd.DataFrame(dict)

# using dropna() function

df.dropna()

# Multiple indexing

import pandas as pd

# Create the MultiIndex

midx = pd.MultiIndex.from\_tuples([(10, 'Ten'), (10, 'Twenty'),

(20, 'Ten'), (20, 'Twenty')],

names =['Num', 'Char'])

# Print the MultiIndex

print(midx)

# data aggregation on multi index

df = pd.DataFrame([[1, 2, 3,4,5],

[4, 5, 6,7,8],

[7, 8, 9,10,11]],

columns=['A','B','C','D','E'])

df.agg(['sum', 'min'])

df.agg({'A' : ['sum', 'min'], 'B' : ['min', 'max']})

df.agg("mean", axis="columns")















