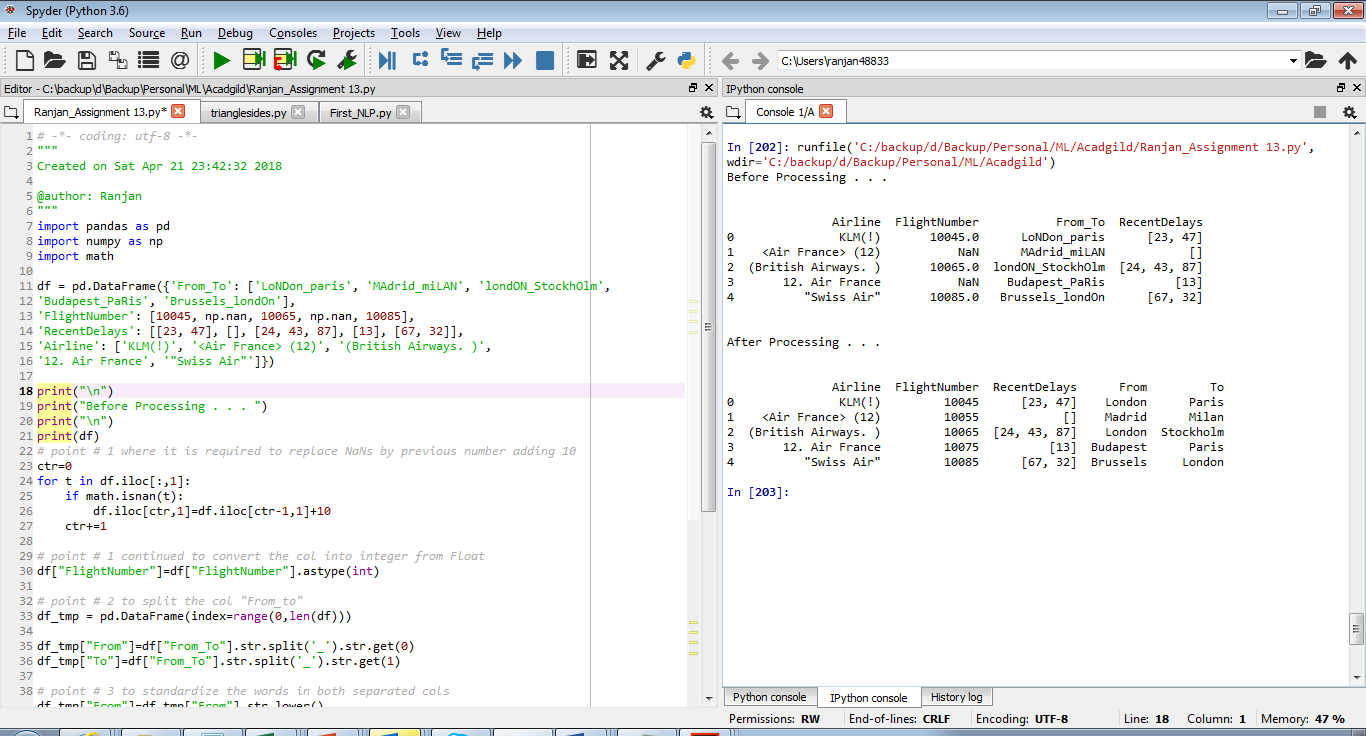
**Response for Assignment 13**



**Below is the source code**

"""

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"""

import pandas as pd

import numpy as np

import math

df = pd.DataFrame({'From\_To': ['LoNDon\_paris', 'MAdrid\_miLAN', 'londON\_StockhOlm',

'Budapest\_PaRis', 'Brussels\_londOn'],

'FlightNumber': [10045, np.nan, 10065, np.nan, 10085],

'RecentDelays': [[23, 47], [], [24, 43, 87], [13], [67, 32]],

'Airline': ['KLM(!)', '<Air France> (12)', '(British Airways. )',

'12. Air France', '"Swiss Air"']})

print("\n")

print("Before Processing . . . ")

print("\n")

print(df)

# point # 1 where it is required to replace NaNs by previous number adding 10

ctr=0

for t in df.iloc[:,1]:

if math.isnan(t):

df.iloc[ctr,1]=df.iloc[ctr-1,1]+10

ctr+=1

# point # 1 continued to convert the col into integer from Float

df["FlightNumber"]=df["FlightNumber"].astype(int)

# point # 2 to split the col "From\_to"

df\_tmp = pd.DataFrame(index=range(0,len(df)))

df\_tmp["From"]=df["From\_To"].str.split('\_').str.get(0)

df\_tmp["To"]=df["From\_To"].str.split('\_').str.get(1)

# point # 3 to standardize the words in both separated cols

df\_tmp["From"]=df\_tmp["From"].str.lower()

df\_tmp["From"]=df\_tmp["From"].str.capitalize()

df\_tmp["To"]=df\_tmp["To"].str.lower()

df\_tmp["To"]=df\_tmp["To"].str.capitalize()

# point # 4 to delete the "From\_To" col and attach the temporary DataFrame

df=pd.concat([df,df\_tmp],axis=1)

df=df.drop("From\_To",1)

print("\n")

print("After Processing . . . ")

print("\n")

print(df)

# point # 5 has not been done