**10.FEATURE SCALING**

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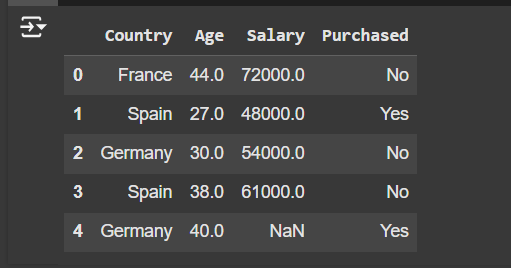
**AIM: To do feature scaling in the given dataset.**

import numpy as np

import pandas as pd

df=pd.read\_csv('Data.csv')

df.head()



df.Country.fillna(df.Country.mode()[0],inplace=True)

features=df.iloc[:,:-1].values

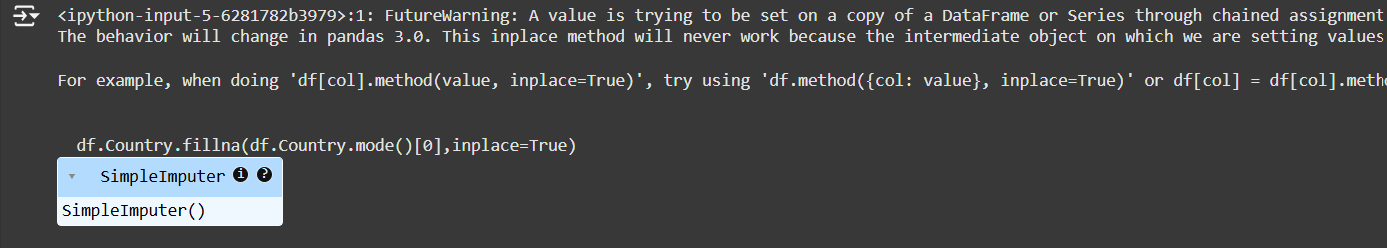
label=df.iloc[:,-1].values

from sklearn.impute import SimpleImputer

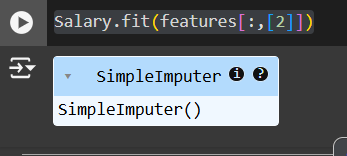
age=SimpleImputer(strategy="mean",missing\_values=np.nan)

Salary=SimpleImputer(strategy="mean",missing\_values=np.nan)

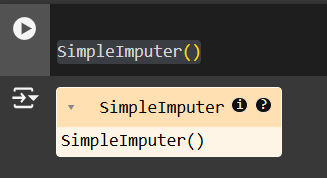
age.fit(features[:,[1]])



Salary.fit(features[:,[2]])



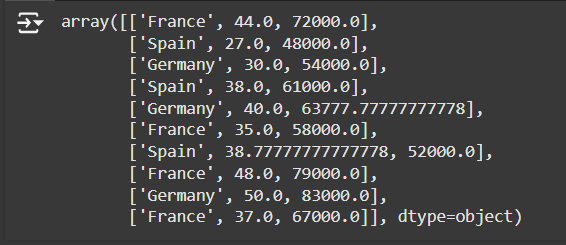
SimpleImputer()



features[:,[1]]=age.transform(features[:,[1]])

features[:,[2]]=Salary.transform(features[:,[2]])

features

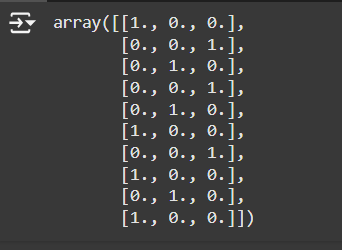


from sklearn.preprocessing import OneHotEncoder

oh = OneHotEncoder(sparse\_output=False)

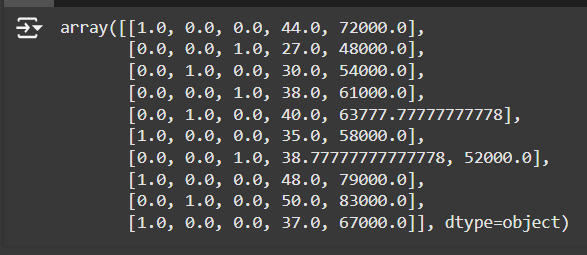
Country=oh.fit\_transform(features[:,[0]])

Country



final\_set=np.concatenate((Country,features[:,[1,2]]),axis=1)

final\_set



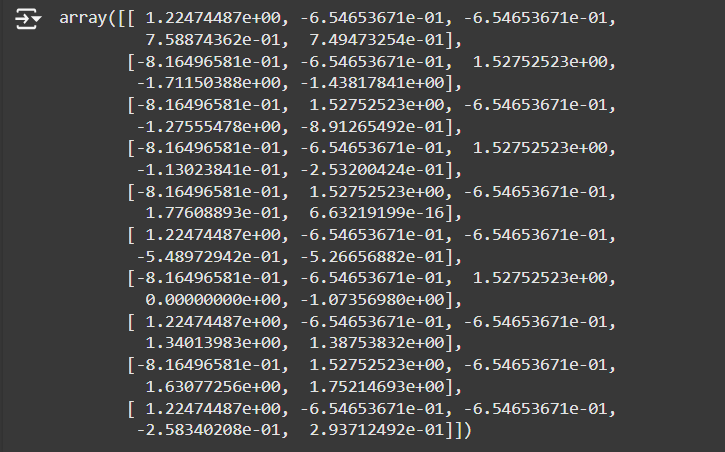
from sklearn.preprocessing import StandardScaler

sc=StandardScaler()

sc.fit(final\_set)

feat\_standard\_scaler=sc.transform(final\_set)

feat\_standard\_scaler



from sklearn.preprocessing import MinMaxScaler

mms=MinMaxScaler(feature\_range=(0,1))

mms.fit(final\_set)

feat\_minmax\_scaler=mms.transform(final\_set)

feat\_minmax\_scaler

