**17.How to calculate correlation between variables in a data set using python?**

**Objective:**

* To find relationship between two variable using correlation in python.

**Process:**

* Take sample data set.
* Store it as rows and columns using data frame.
* Call the correlation function by df.corr(method)
* By using value of correlation co efficients, we can find the relationship between the variables.

**Input:**

* Sample data set.

**Output:**

* Value for correlation co-efficient.
* The value of the correlation co efficients should be in -1 to 1.

**Source code:**

#import library function

import pandas as pd

#sample data

data={'salary':[1000,200,300,400,50,400,300,2000,

100,50],

'age':[25,26,25,23,30,29,23,23,25,25],

'rating':[4,3.24,2.5,2.25,2,2.25,2.5,2.75,3.2,4.2], 'bonus':[2500,1200,900,3000,1800,1400,850,250,750, 1000]}

#store in rows and column using pandas data frame

df=pd.DataFrame(data)

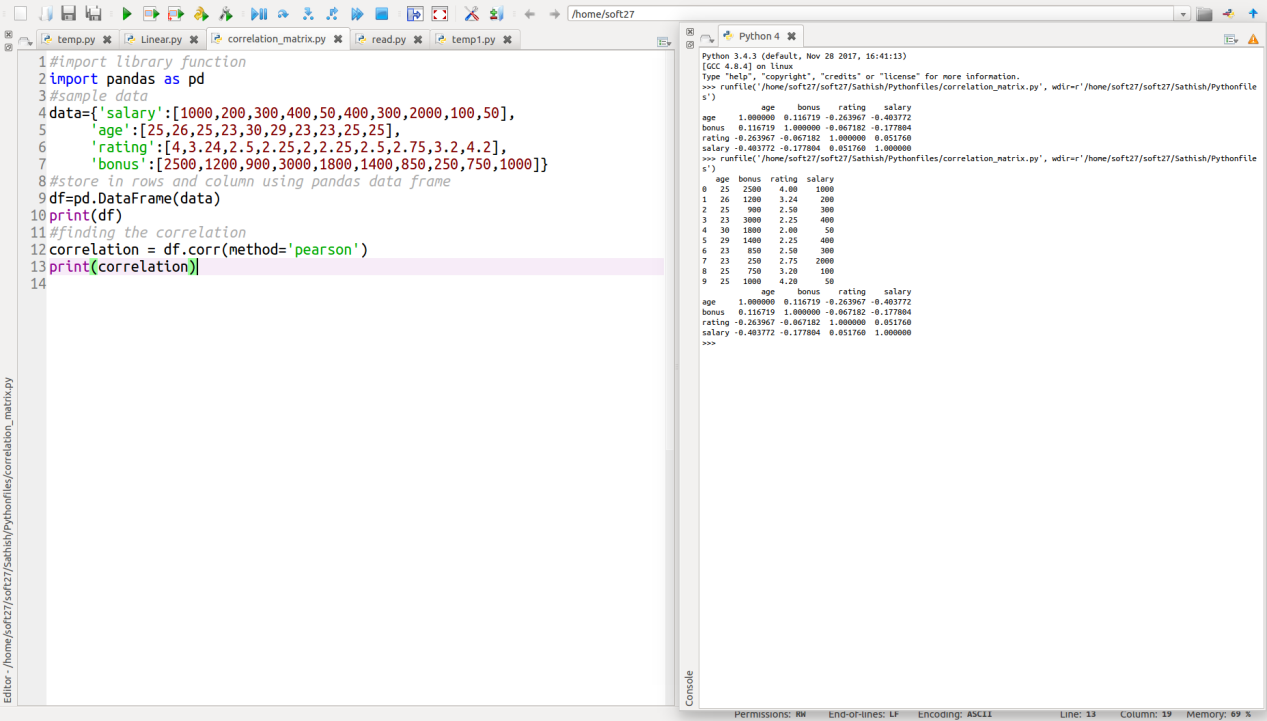
print(df)

#finding the correlation

correlation = df.corr(method='pearson')

print(correlation)

**Screen shots:**

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