**3.How to calculate the measure of dispersion for a data set using python?**

**Objective:**

* To calculate the measure of dispersion for a sample data set in python.

**Process:**

* Range:

Difference between the largest and smallest values.

It takes largest and smallest value from the data set.

Its used only the data less than 6 in a data set.

* Variance:

Variance measures how far a data set is spread out.

**Average squared deviation of values from mean.**

* **Standard Deviation**

**It takes all data from the dataset.**

**We can use standars deviation, if the data in a dataset is more than 6.**

**Standard Deviation is the square root of variance.**

****Input:****

**Data Set(CSV file)**

****Output:****

**The value of range, Variance, Standard deviation of corresponding data in a data set.**

****Source Code:****

#import pandas library

import pandas as pd

#load the data from CSV file

data=pd.read\_csv('/home/soft27/soft27/Sathish/Pythonfiles/

Employee.csv')

#creating the DataFrame

df=pd.DataFrame(data)

print("Actual data from the CSV file:")

print(df)

#Calculate the variance

print("The variance is:")

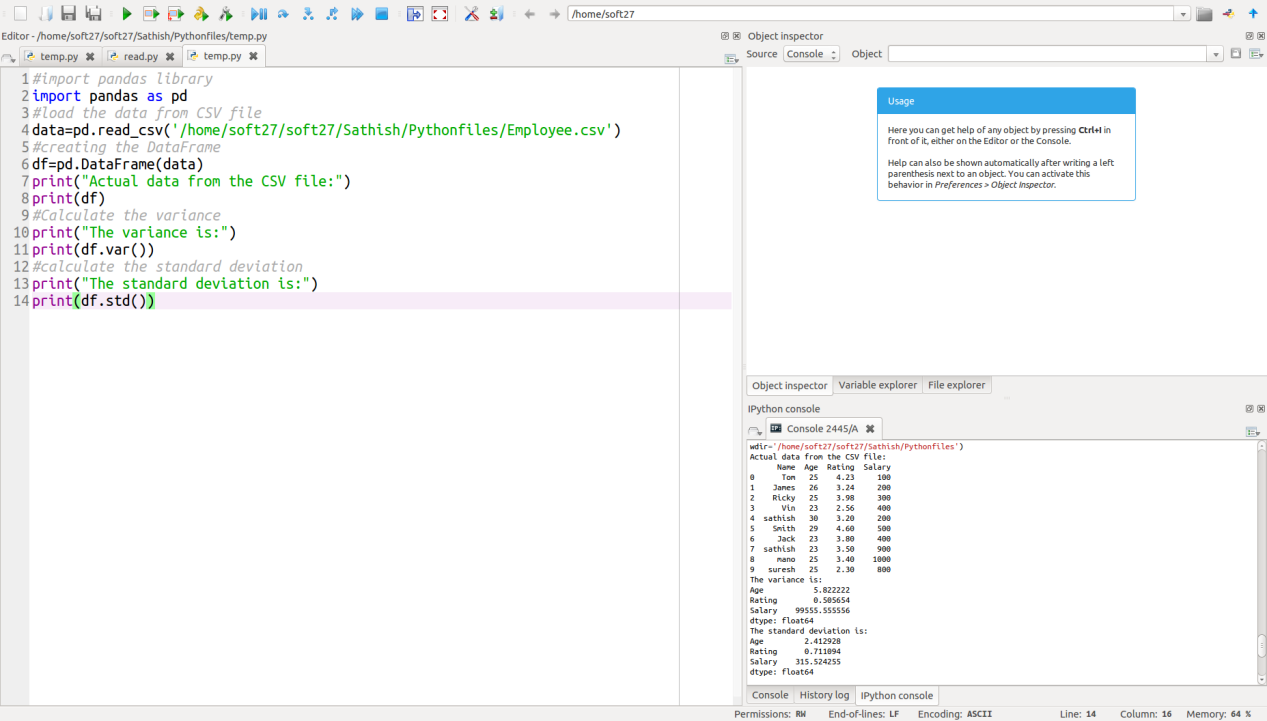
print(df.var())

#calculate the standard deviation

print("The standard deviation is:")

print(df.std())

****Screen Shot:****

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