**SUM SQUARE RESIDUAL**

import numpy as np

x = np.array([0,1, 2, 3, 4, 5,6,7,8,9])

y = np.array([1,3,2,5,7,8,8,9,10,12])

x\_mu=np.mean(x)

y\_mu=np.mean(y)

x\_1=x\*(x-x\_mu)

y\_1=x\*(y-y\_mu)

print(x\_1)

print(y\_1)

p=sum(y\_1)

q=sum(x\_1)

b\_1=p/q

print(b\_1)

b\_0=y\_mu-(b\_1\*x\_mu)

print(b\_0)

SSR = sum((y-y\_mu)\*(y-y\_mu))

print (SSR)

**OUTPUT**

BETA\_0 =1.1696969696969697

BEATA\_1 =1.2363636363636363

SUM SQUARE ERROR = 118.5

**OBSERVATION**

The values b\_0 and b\_1 are the coefficients of regression, b\_0 gives the y- intercept and b\_1 gives the slope of the regression line.