**EXPERIMENT-3**

IMPLEMENTING REGRESSION

**Importing Libraries**

#%%

import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

**Collecting Data**

#%%

from sklearn.datasets import make\_regression

X, y = make\_regression(n\_samples=100, n\_features=1)

df=pd.DataFrame({'X':X.flatten(),'Y':y})

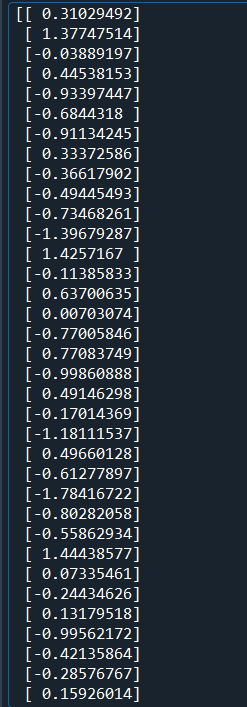
print(X)

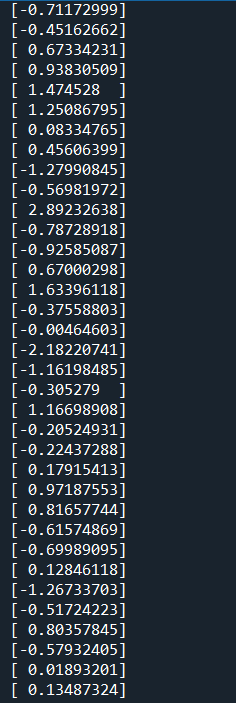
print(y)

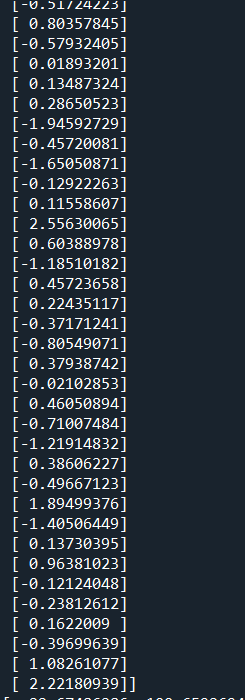
#plot regression dataset

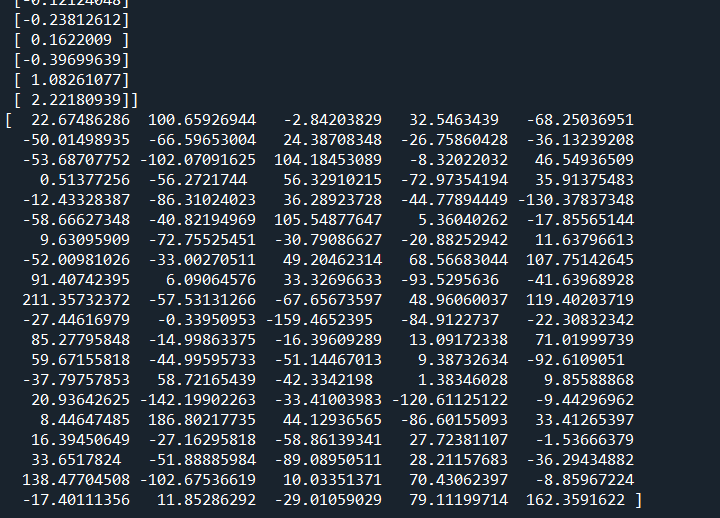
plt.scatter(X,y,marker='.')

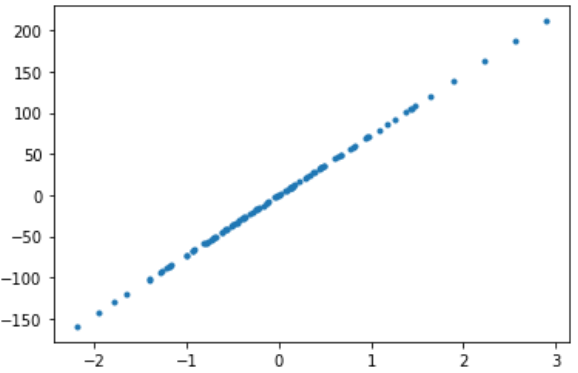
plt.show()











**Preprocessing Data**

#%%

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

y=df.iloc[:,1].values

**Creating test and train**

#%%

#Splitting into training and testing

from sklearn.model\_selection import train\_test\_split

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y,

test\_size=0.10, random\_state=1)

**Model Building**

#%%

from sklearn import datasets, linear\_model

from sklearn.linear\_model import LinearRegression

#%%

# Create linear regression object

reg = linear\_model.LinearRegression()

#%%

#Train the model

reg.fit(X\_train,y\_train)

**Finding coeficients**

#%%

#Coefficients

print("Coeficients",reg.coef\_)

#%%

#Intercept

print("Intercept",reg.intercept\_)

**Histogram**

#%%

#Plotting histogram

plt.hist(np.squeeze(X))

