**LINEAR AND POLYNOMIAL REGRESSION:**

**CODE:**

import numpy as np

import matplotlib.pyplot as plt

import pandas as pd

dataset = pd.read\_csv('Position\_Salaries.csv')

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

y = dataset.iloc[:, -1].values

from sklearn.linear\_model import LinearRegression

lin\_reg = LinearRegression()

lin\_reg.fit(X, y)

#Linear Regression classifier model

#(copy\_X=True, fit\_intercept=True, n\_jobs=None, normalize=False)

from sklearn.preprocessing import PolynomialFeatures

poly\_reg = PolynomialFeatures(degree = 4)

X\_poly = poly\_reg.fit\_transform(X)

lin\_reg\_2 = LinearRegression()

lin\_reg\_2.fit(X\_poly, y)

#Polynomial Regression classifier model

#LinearRegression(copy\_X=True, fit\_intercept=True, n\_jobs=None, normalize=False)

plt.scatter(X, y, color = 'red')

plt.plot(X, lin\_reg.predict(X), color = 'blue')

plt.title('Truth or Bluff (Linear Regression)')

plt.xlabel('Position Level')

plt.ylabel('Salary')

plt.show()

#Visualising the Polynomial Regression results

plt.scatter(X, y, color = 'red')

plt.plot(X, lin\_reg\_2.predict(poly\_reg.fit\_transform(X)), color = 'blue')

plt.title('Truth or Bluff (Polynomial Regression)')

plt.xlabel('Position level')

plt.ylabel('Salary')

plt.show()

**OUTPUT:**



