

```
In [31]: import pandas as pd
from sklearn import linear_model
import matplotlib.pyplot as plt
url="https://raw.githubusercontent.com/apratim777/apratim777/master/Position_Salaries.csv"
df= pd.read_csv(url)
print(df.head())
```

	Position	Level	Salary
0	Business Analyst	1	45000
1	Junior Consultant	2	50000
2	Senior Consultant	3	60000
3	Manager	4	80000
4	Country Manager	5	110000

```
In [32]: #choose x and y
# x is Level column
x=df.iloc[:,1:2].values
y=df.iloc[:,2].values
print(x.shape)
print(y.shape)
```

(10, 1)

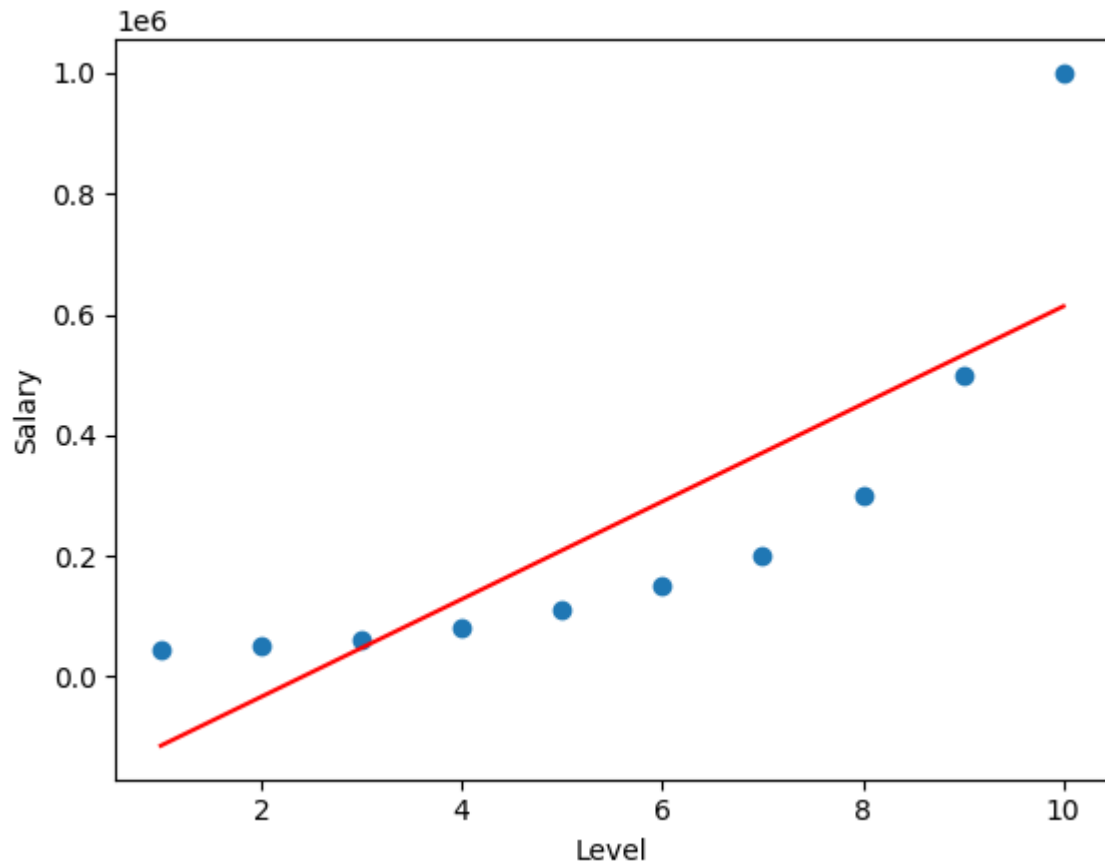
(10,)

```
In [33]: reg=linear_model.LinearRegression()
reg.fit(x,y)
acc=reg.score(x,y)
print(acc)
```

0.6690412331929895

```
In [34]: plt.xlabel('Level')
plt.ylabel('Salary')
plt.scatter (df.Level,df.Salary)
plt.plot(df.Level,reg.predict(x),color='red')
```

Out[34]: [<matplotlib.lines.Line2D at 0x1adb16db100>]



```
In [35]: from sklearn.preprocessing import PolynomialFeatures
reg2=PolynomialFeatures(degree=5)
x_poly=reg2.fit_transform(x)
print(x_poly.shape)
```

(10, 6)

```
In [36]: reg3=linear_model.LinearRegression()
reg3.fit(x_poly,y)
acc=reg3.score(x_poly,y)
print(acc)
```

0.9997969027099755

```
In [37]: plt.xlabel('Level')
plt.ylabel('Salary')
plt.scatter (df.Level,df.Salary)
plt.plot(df.Level,reg3.predict(reg2.fit_transform(x) ),color='red')
```

Out[37]: [<matplotlib.lines.Line2D at 0x1adb17fe2e0>]

