

# Assignment – 7

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Batch – 35

## Question - 1

```
from google.colab import drive
drive.mount('/content/drive')

import pandas as pd
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression

data = pd.read_csv("/content/drive/MyDrive/SML Dataset/Salary_Data.csv")

X = data[['YearsExperience']]
y = data['Salary']

model = LinearRegression()
model.fit(X, y)

y_pred = model.predict(X)

plt.scatter(X, y, color='blue', label='Actual data')
plt.plot(X, y_pred, color='red', label='Best fit line')
plt.title('Years of Experience vs Salary')
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.legend()
plt.grid(True)
plt.show()
```

## OUTPUT –



## Question – 2

```
from google.colab import drive
drive.mount('/content/drive')
```

```
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
```

```
data = pd.read_csv("/content/drive/MyDrive/SML Dataset/Assignment_7.csv")
```

```
X = data[['Feature 1']]
y = data['Target (Y)']
print(data)
```

```
data.head()
```

```
model = LinearRegression()
model.fit(X, y)
```

```
y_pred = model.predict(X)
```

```
plt.scatter(X, y, color='blue', label='Actual data')
plt.plot(X, y_pred, color='red', label='Best fit line')
plt.title('Feature 1 vs Target (Y)')
plt.xlabel('Feature 1')
plt.ylabel('Target (Y)')
plt.legend()
plt.grid(True)
plt.show()
```

## OUTPUT -

	Feature 1	Feature 2	Feature 3	Feature 4	Target (Y)
0	1.2	2.3	3.1	4.2	15.6
1	2.4	1.9	2.8	3.5	13.1
2	3.5	2.7	1.5	2.9	12.4
3	4.1	3.0	3.6	4.8	18.2
4	1.9	2.8	2.5	3.2	14.1
5	3.7	2.5	1.9	4.0	16.0
6	2.1	3.2	2.2	4.1	14.5
7	3.3	2.4	3.0	4.5	17.3
8	2.8	3.1	1.8	3.6	14.9
9	4.0	3.3	2.7	4.9	19.2

