```
import pandas as pd
import requests
from io import StringIO

url = "https://raw.githubusercontent.com/campusx-official/100-days-of-machine-learning/refs/heads/main/day48-simple-linear-regression/placement.csv"
headers = {"User-Agent": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10.14; rv:66.0) Gecko/20100101 Firefox/66.0"}
req = requests.get(url, headers=headers)
data = StringIO(req.text)
df = pd.read_csv(data)
```

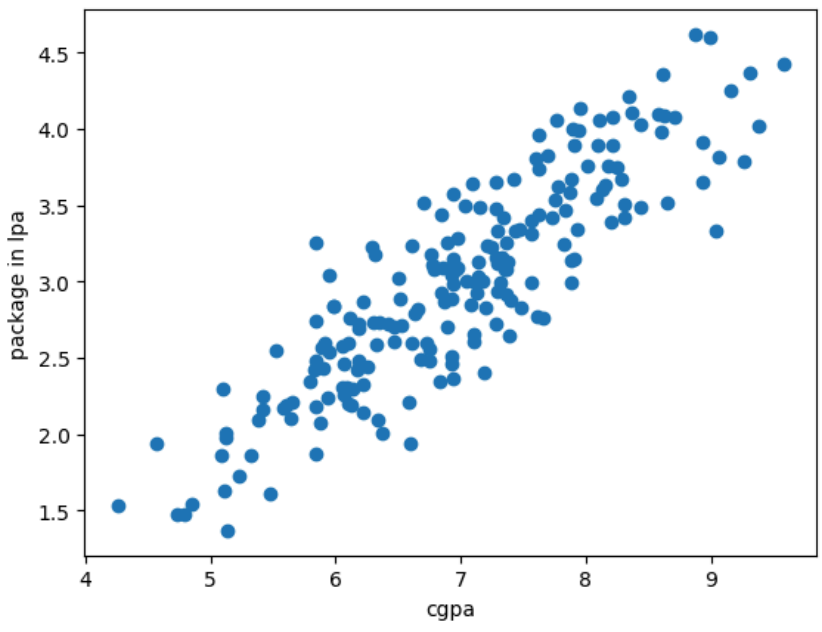
```
df.head()
```

	cgpa	package
0	6.89	3.26
1	5.12	1.98
2	7.82	3.25
3	7.42	3.67
4	6.94	3.57

Next steps: Generate code with df | New interactive sheet

```
import matplotlib.pyplot as plt
plt.scatter(df['cgpa'],df['package'])
plt.xlabel("cgpa")
plt.ylabel("package in lpa")
```

```
Text(0, 0.5, 'package in lpa')
```




```
x = df.iloc[:,0:1]
y = df.iloc[:,1]
```

```
from sklearn.model_selection import train_test_split
```

```
x_train,x_test,y_train,y_test = train_test_split(x,y,test_size=0.2,random_state=2)
```

```
from sklearn.linear_model import  LinearRegression
```

```
lr = LinearRegression()
```

```
lr.fit(x_train,y_train)
```

```
▾ LinearRegression
LinearRegression()
```

```
x_test
```

	cgpa
112	8.58
29	7.15
182	5.88
199	6.22
193	4.57
85	4.79
10	5.32
54	6.86
115	8.35
35	6.87
12	8.94
92	7.90
13	6.93
126	5.91
174	7.32
2	7.82
44	5.09
3	7.42
113	6.94
14	7.73
23	6.19
25	7.28
6	6.73
134	7.20
165	8.21
173	6.75
45	7.87
65	7.60
48	8.63
122	5.12
178	8.15
64	7.36
9	8.31
57	6.60
78	6.59
71	7.47
128	7.93
176	6.29
131	6.37
53	6.47

Next steps: Generate code with `x_test` New interactive sheet

```
y_test
```

	package
112	4.10
29	3.49
182	2.08
199	2.33
193	1.94
85	1.48
10	1.86
54	3.09
115	4.21
35	2.87
12	3.65
92	4.00
13	2.89
126	2.60
174	2.99
2	3.25
44	1.86
3	3.67
113	2.37
14	3.42
23	2.48

```
lr.predict(x_test.iloc[0].values.reshape(1,1))
```

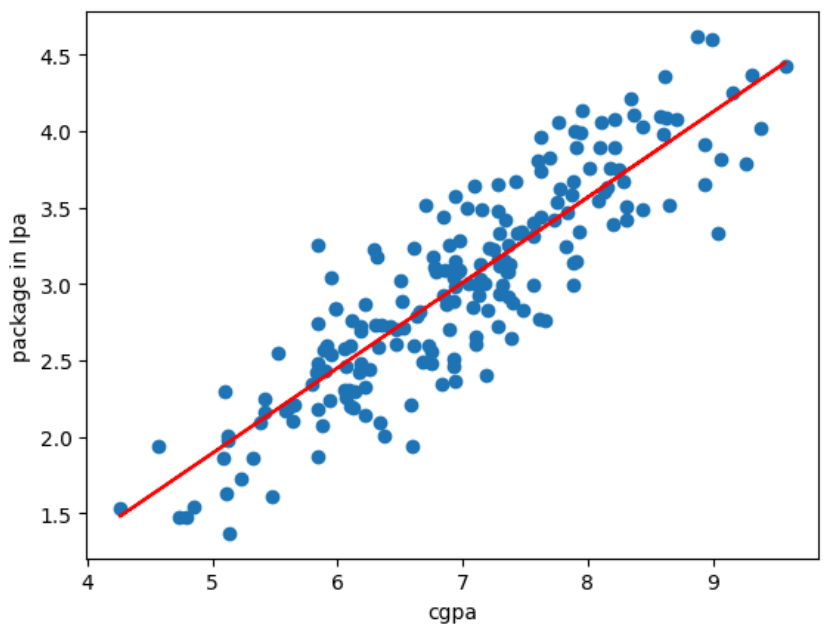
```
/usr/local/lib/python3.12/dist-packages/sklearn/utils/validation.py:2739: UserWarning: X does not have valid feature names, but LinearRegression was fitted with feature
  warnings.warn(
array([3.89111601])
```

```
lr.predict(x_test.iloc[2].values.reshape(1,1))
```

```
/usr/local/lib/python3.12/dist-packages/sklearn/utils/validation.py:2739: UserWarning: X does not have valid feature names, but LinearRegression was fitted with feature
  warnings.warn(
array([2.38464568])
```

```
plt.scatter(df['cgpa'],df['package'])
plt.plot(x_train,lr.predict(x_train),color='red')
plt.xlabel("cgpa")
plt.ylabel("package in lpa")
```

```
Text(0, 0.5, 'package in lpa')
```




```
m = lr.coef_
b = lr.intercept_
```