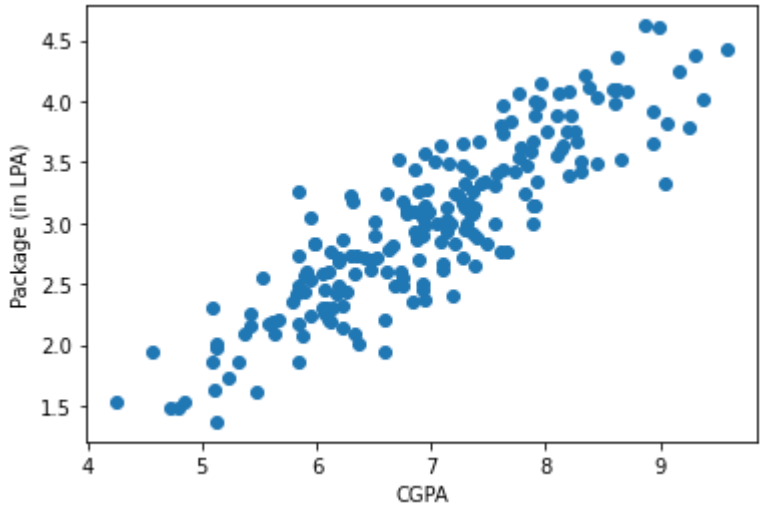
In [3]:
```
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np

df=pd.read_csv('placement-1.csv')
df.head()
```

Out[3]:

	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

In [4]:
```
plt.scatter(df['cgpa'],df['package'])
plt.xlabel('CGPA')
plt.ylabel('Package (in LPA)')
```

Out[4]: Text(0, 0.5, 'Package (in LPA)')



In [75]:
```
x=df.iloc[:,0:1]
y=df.iloc[:,-1]
```

In [76]:
```
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,rand
```

In [77]:
```
from sklearn.linear_model import LinearRegression

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

Out[77]:
```
▾ LinearRegression

LinearRegression()
```

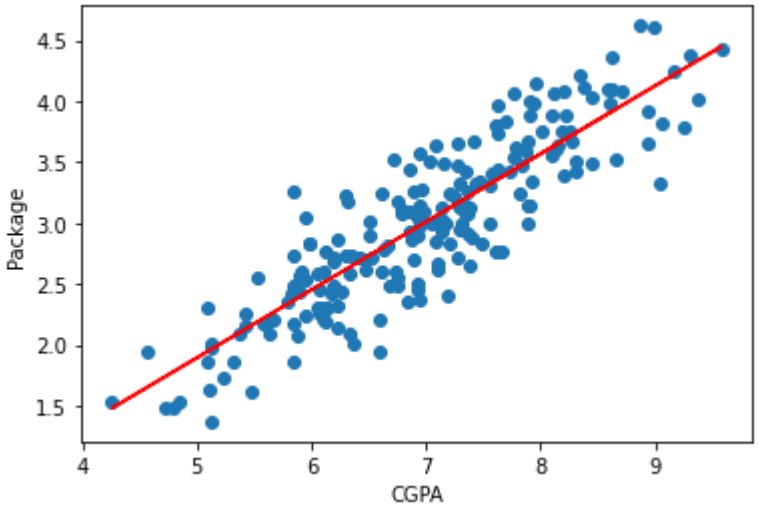
In [78]:
```
lr.predict(x_test.iloc[0].values.reshape(1,1))
```

```
/home/sl/.local/lib/python3.8/site-packages/sklearn/base.py:464: Us
erWarning: X does not have valid feature names, but LinearRegressio
n was fitted with feature names
  warnings.warn(
```

Out[78]:
```
array([3.89111601])
```

In [79]:
```
plt.scatter(df['cgpa'],df['package'])
plt.plot(x_train,lr.predict(x_train),color='red')
plt.xlabel('CGPA')
plt.ylabel('Package')
```

Out[79]:
```
Text(0, 0.5, 'Package')
```



In [80]:
```
m=lr.coef_
```

In [81]:
```
m
```

Out[81]:
```
array([0.55795197])
```

In [82]:
```
b=lr.intercept_
b
```

Out[82]:
```
-0.8961119222429144
```

In [85]:
```
y=m*8.58+b
y
```

Out[85]:
```
array([3.89111601])
```

In [ ]: