

In [3]:

```
import pandas as pd
df=pd.read_csv("/home/ise/Desktop/lr",header=None)
```

In [4]:

```
X=df[0]
Y=df[1]
```

In [5]:

```
mean_x = sum(X) / len(X)
mean_y = sum(Y) / len(Y)
numerator = 0
denominator = 0

for i in range(len(X)):
    numerator += (X[i] - mean_x) * (Y[i] - mean_y)
    denominator += (X[i] - mean_x) ** 2
```

In [6]:

```
slope = numerator / denominator
intercept = mean_y - slope * mean_x
```

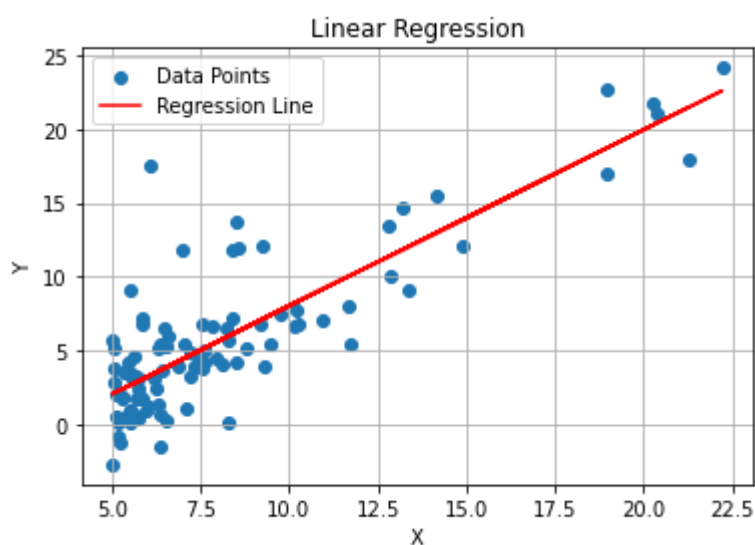
In [7]:

```
print("Linear Regression Equation: y = {:.2f}x + {:.2f}".format(slope, intercept))
```

Linear Regression Equation: y = 1.19x + -3.90

In [9]:

```
regression_line = [slope * xi + intercept for xi in X]
import matplotlib.pyplot as plt
plt.scatter(X, Y, label='Data Points')
plt.plot(X, regression_line, color='red', label='Regression Line')
plt.xlabel('X')
plt.ylabel('Y')
plt.title('Linear Regression')
plt.legend()
plt.grid(True)
plt.show()
```



In [ ]: