

In [25]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import sklearn
from sklearn import datasets
from sklearn import linear_model
from sklearn.model_selection import train_test_split
from sklearn.metrics import mean_squared_error, r2_score
```

In [26]:

```
x,y=datasets.load_iris(return_X_y=True)
x=x[:,np.newaxis,2]
```

In [27]:

```
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.20,random_state=0)
```

In [28]:

```
classifier=linear_model.LinearRegression()
```

In [29]:

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

Out[29]:

LinearRegression()

In [30]:

```
y_pred=classifier.predict(x_test)
y_pred
```

Out[30]:

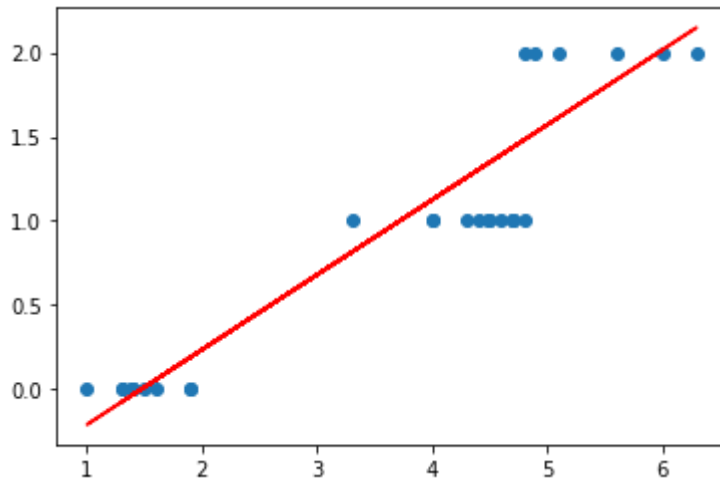
```
array([ 1.6135018 ,  1.12367547, -0.03409585,  2.14785779,  0.01043381,
        2.01426879, -0.07862552,  1.43538313,  1.4799128 ,  1.12367547,
        1.83615013,  1.3463238 ,  1.43538313,  1.39085347,  1.43538313,
       -0.03409585,  1.3463238 ,  1.30179413, -0.03409585, -0.07862552,
        1.52444246,  1.3463238 ,  0.18855248, -0.03409585,  1.4799128 ,
       -0.21221452,  0.18855248,  1.25726447,  0.81196781,  0.05496348])
```

In [33]:

```
plt.scatter(x_test,y_test)  
plt.plot(x_test,y_pred,color="red")
```

Out[33]:

[<matplotlib.lines.Line2D at 0x2c7d5a4f880>]



In [34]:

```
mean_squared_error(y_test,y_pred)
```

Out[34]:

0.07886708425516747

In [32]:

```
r2_score(y_test,y_pred)
```

Out[32]:

0.8536487096295862