In [1]:
```
import numpy as np
import pandas as pd
from sklearn.linear_model import LinearRegression
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.metrics import classification_report
```

In [16]:
```
df= pd.read_csv("Book1.csv")
df
```

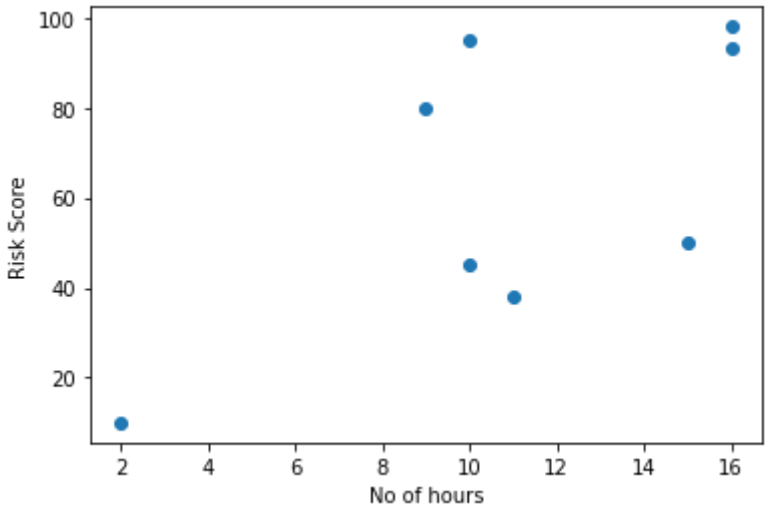
Out[16]:

	spent_driving	risk
0	10	95
1	9	80
2	2	10
3	15	50
4	10	45
5	16	98
6	11	38
7	16	93

In [21]:
```
x=df.spent_driving
y=df.risk
```

In [22]:
```
plt.xlabel("No of hours")
plt.ylabel("Risk Score")
plt.scatter(x,y)
```

Out[22]:
```
<matplotlib.collections.PathCollection at 0x1613d849cf0>
```



In [18]:
```
def getCoef(x,y):
    mean_x=np.mean(x)
    mean_y=np.mean(y)
    n=len(x)
    num = 0
    den= 0
```

```
        num += (x[i] - mean_x)*(y[i] - mean_y)
        den += (x[i] - mean_x)**2
    b1 = num / den
    b0 = mean_y - (b1*mean_x)

    return(b0 , b1)
```

In [24]:
```
c = getCoef(x,y)
c
```

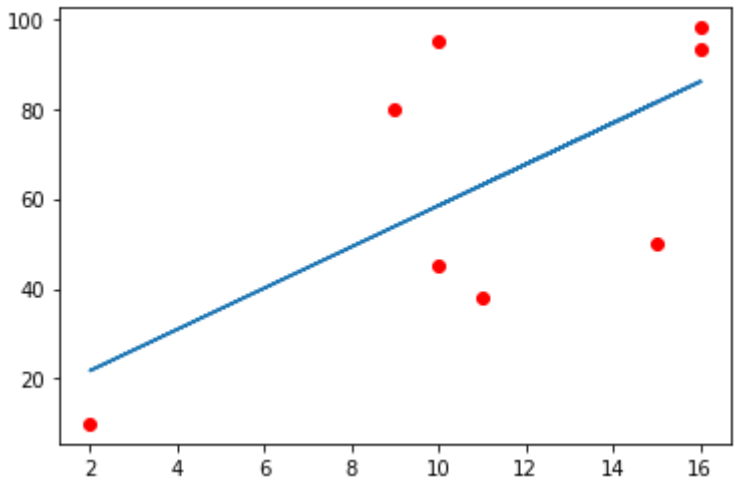
Out[24]:
```
(12.584627964022893, 4.58789860997547)
```

In [25]:
```
y_pred = c[0] + c[1]*x
y_pred
```

Out[25]:
```
0    58.463614
1    53.875715
2    21.760425
3    81.403107
4    58.463614
5    85.991006
6    63.051513
7    85.991006
Name: spent_driving, dtype: float64
```

In [27]:
```
plt.plot(x,y_pred)
plt.scatter(x,y,color="red")
```

Out[27]:
```
<matplotlib.collections.PathCollection at 0x1613dae62c0>
```



In [ ]: