In [85]:
```python
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error,r2_score
import pandas as pd
```
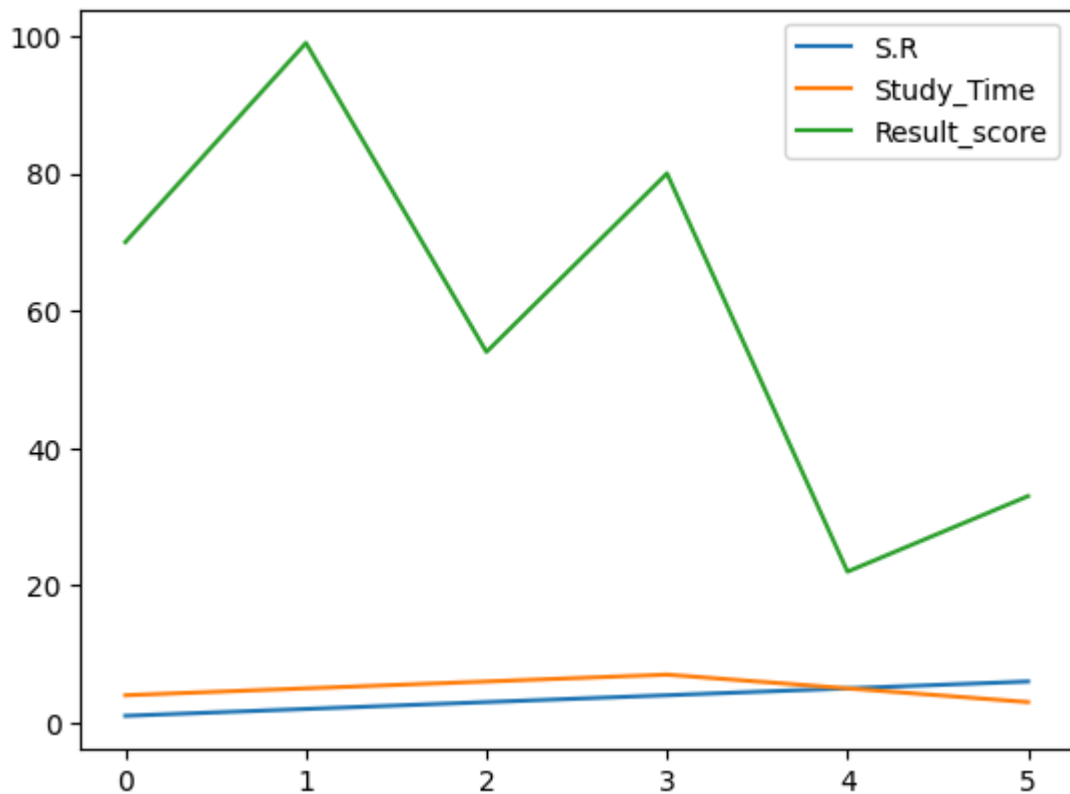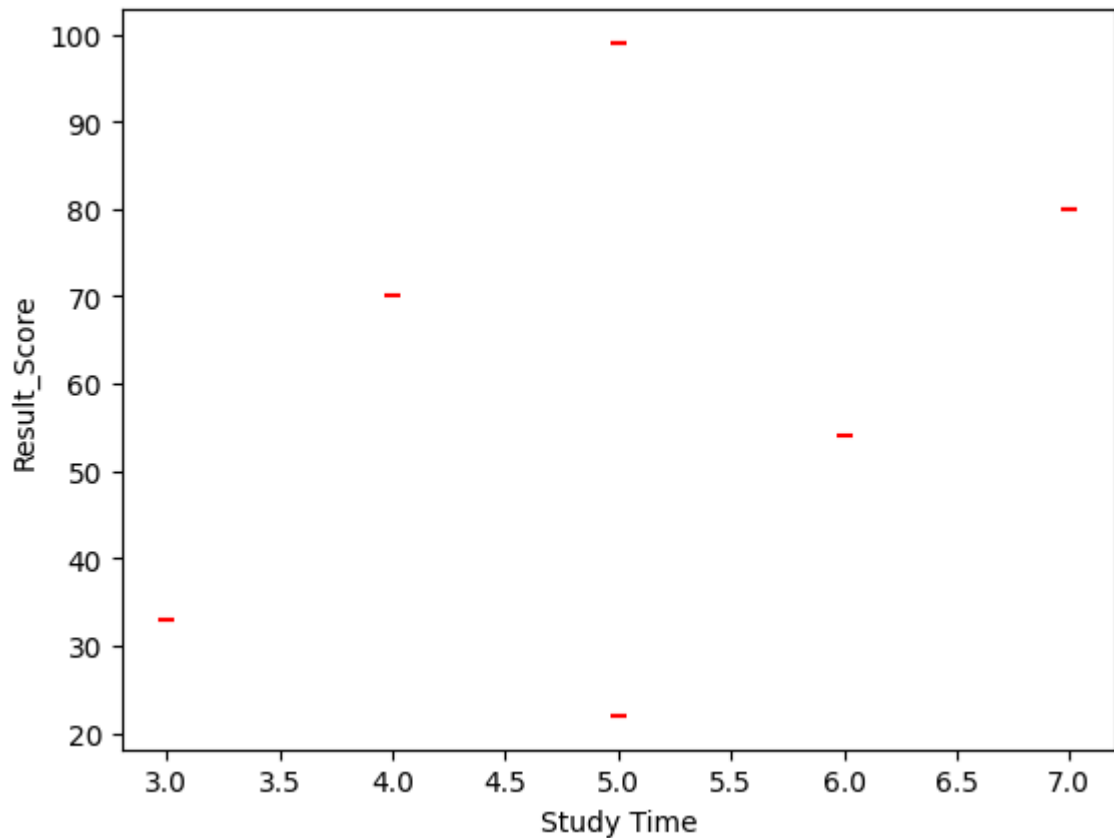
In [86]:
```python
#load Data
data = pd.read_csv('Book1.csv')  # from project root
print(data.to_string())
data.plot()
plt.show()
```

```
   S.R  Study_Time  Result_score
0    1           4            70
1    2           5            99
2    3           6            54
3    4           7            80
4    5           5            22
5    6           3            33
```


In [87]:
```python
plt.xlabel('Study Time')
plt.ylabel('Result_Score')
plt.scatter(data.Study_Time,data.Result_score, color='red',marker='_')
```

Out[87]:   <matplotlib.collections.PathCollection at 0x18b0f32f490>

```
In [88]:  modal=LinearRegression()
          modal.fit(data[['Study_Time']],data.Result_score)
```

Out[88]: ▼ LinearRegression   ⓘ ❓

          LinearRegression()

```
In [89]:  modal.predict([[5]])
```

c:\Users\Mr. Nitin\Desktop\quantum_ML\lib\site-packages\sklearn\utils\validation.
py:2739: UserWarning: X does not have valid feature names, but LinearRegression w
as fitted with feature names
  warnings.warn(

Out[89]: array([59.66666667])

```
In [90]:  print(modal.coef_)
          print(modal.intercept_)
```

[7.8]
20.66666666666667

```
In [91]:  #to understand how mx+c working here m=coef,x=value to be predict and c= interse
          7.8*5+20.66
```

Out[91]: 59.66

```
In [92]:  d=pd.read_csv('Book2.csv')
          d.head(4)
```

Out[92]:

	S.R	Study_Time
0	1	40
1	2	57
2	3	65
3	4	73

In [93]:
```python
score=modal.predict(d[['Study_Time']])
score
```

Out[93]: array([332.66666667, 465.26666667, 527.66666667, 590.06666667,
              426.26666667, 285.86666667])

In [94]:
```python
d['score'] =score
```

In [95]:
```python
d.to_csv("prediction.csv")
```

In [96]:
```python
plt.xlabel('Study Time')
plt.ylabel('Result_Score')
plt.scatter(data.Study_Time,data.Result_score, color='red',marker='_')
plt.plot(data.Result_score,modal.predict(data[['Study_Time']]),color='blue')
```

Out[96]: [<matplotlib.lines.Line2D at 0x18b0f6214e0>]