```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

```
data = pd.read_csv("student_scores.csv")
data.head()
```

	Hours	Scores
0	2.5	21
1	5.1	47
2	3.2	27
3	8.5	75
4	3.5	30

```
data.isnull().sum()
```

```
Hours     0
Scores    0
dtype: int64
```

```
x=data.Hours
x.head()
```

```
0    2.5
1    5.1
2    3.2
3    8.5
4    3.5
Name: Hours, dtype: float64
```

```
y=data.Scores
y.head()
```

```
0    21
1    47
2    27
3    75
4    30
Name: Scores, dtype: int64
```

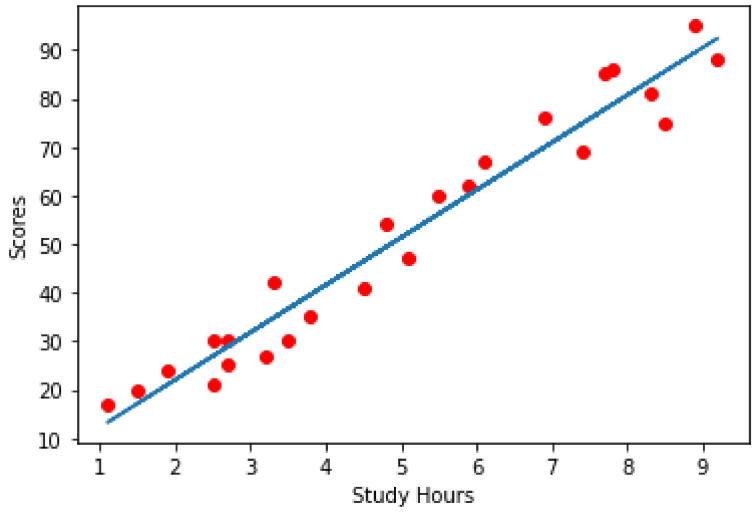
```
n=len(x)
m=0
c=0
l=0.001
```

```
loss=[]


for i in range(10000):
  ypred=m*x+c
  MSE=(1/n)*sum((ypred-y)*2)
  dm=(2/n)*sum(x*(ypred-y))
  dc=(2/n)*sum(ypred-y)
  c=c-l*dc
  m=m-l*dm
  loss.append(MSE)


print(m,c)
y_pred=m*x+c
```

```
9.778926482741683 2.4643253044220517
```

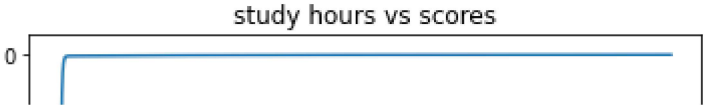
```
plt.scatter(x,y,color="red")
plt.plot(x,y_pred)
plt.xlabel("Study Hours")
plt.ylabel("Scores")
```

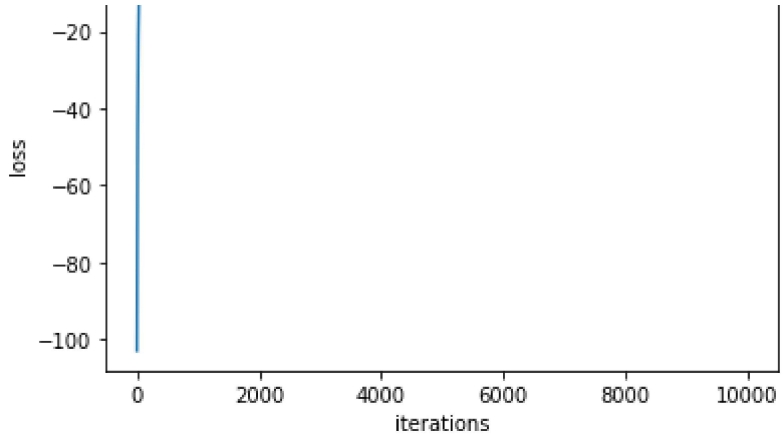
```
Text(0, 0.5, 'Scores')
```




```
plt.title("study hours vs scores")
plt.plot(loss)
plt.xlabel("iterations")
plt.ylabel("loss")
```

```
Text(0, 0.5, 'loss')
```





✓ 0s completed at 6:44 PM