

#Exp No : 9

#Aim : To perform Simple Linear Regression and find out the coefficients of it.

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Sec:C

Subject : Data Science

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

```
import os
```

```
os.getcwd()
```

```
'C:\\Users\\HP'
```

```
os.chdir("C:\\Users\\HP\\Desktop")
```

```
df=pd.read_csv("Salary.csv")
```

```
df.head()
```

	YearsExperience	Salary
0	1.1	39343
1	1.3	46205
2	1.5	37731
3	2.0	43525
4	2.2	39891

```
df.tail()
```

	YearsExperience	Salary
30	11.2	127345
31	11.5	126756
32	12.3	128765
33	12.9	135675
34	13.5	139465

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 35 entries, 0 to 34
```

```
Data columns (total 2 columns):
```

#	Column	Non-Null Count	Dtype
0	YearsExperience	35 non-null	float64
1	Salary	35 non-null	int64

```
dtypes: float64(1), int64(1)
memory usage: 688.0 bytes
```

```
df.describe()
```

	YearsExperience	Salary
count	35.000000	35.000000
mean	6.308571	83945.600000
std	3.618610	32162.673003
min	1.100000	37731.000000
25%	3.450000	57019.000000
50%	5.300000	81363.000000
75%	9.250000	113223.500000
max	13.500000	139465.000000

```
df.shape
```

```
(35, 2)
```

```
df.size
```

```
70
```

```
df.ndim
```

```
2
```

```
df.isnull()
```

	YearsExperience	Salary
0	False	False
1	False	False
2	False	False
3	False	False
4	False	False
5	False	False
6	False	False
7	False	False
8	False	False
9	False	False
10	False	False
11	False	False
12	False	False
13	False	False
14	False	False
15	False	False
16	False	False
17	False	False
18	False	False
19	False	False
20	False	False

21	False	False
22	False	False
23	False	False
24	False	False
25	False	False
26	False	False
27	False	False
28	False	False
29	False	False
30	False	False
31	False	False
32	False	False
33	False	False
34	False	False