VAC ASSIGNMENT

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CS-BS

LINEAR REGRESSION

AIM:- To implement the salary of the employee using linear regression with machine learning.

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

```
dataset = pd.read_csv('/content/Salary_Data (2).csv')
dataset.head()
```

	YearsExperience	Salary
0	1.1	39343.0
1	1.3	46205.0
2	1.5	37731.0
3	2.0	43525.0
4	2.2	39891.0

```
X = dataset.iloc[:, :-1].values
y = dataset.iloc[:, 1].values
```

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(X,y, test_size = 1/3 , random_state =
```

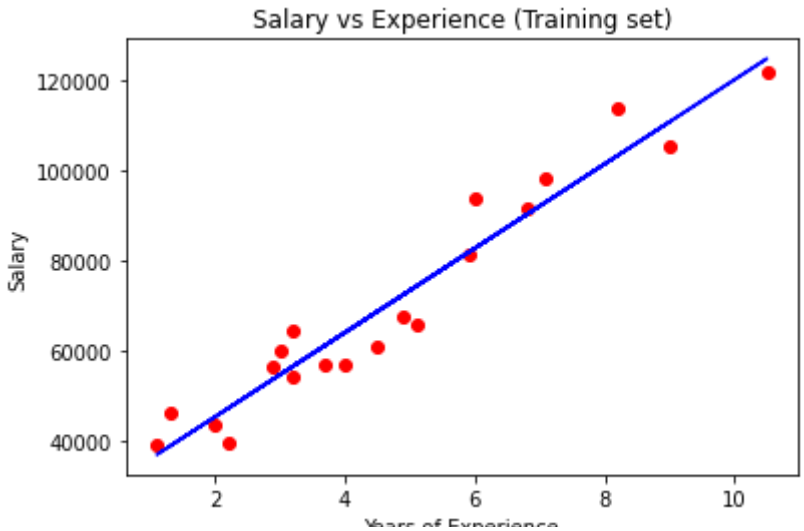
```
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(x_train,y_train)
```

```
LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None, normalize=False)
```

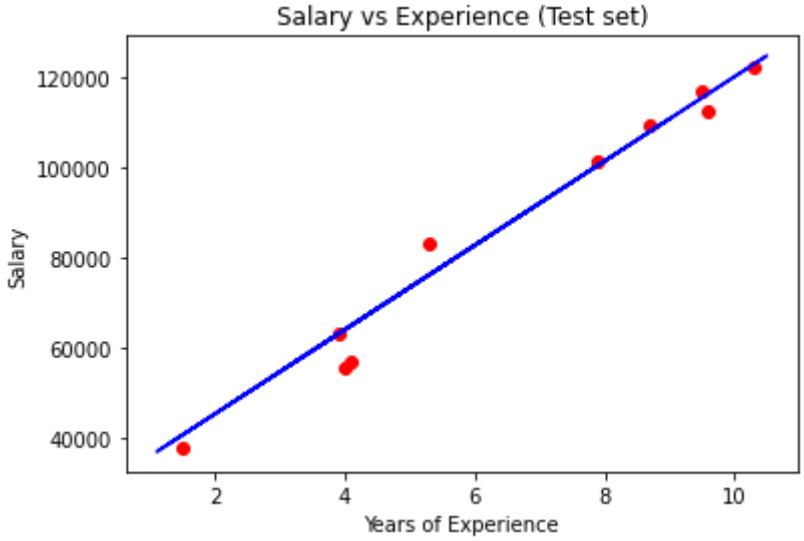
```
y_pred = regressor.predict(x_test)
```

```
plt.scatter(x_train,y_train,color='red')
plt.plot(x_train,regressor.predict(x_train),color='blue')
plt.title('Salary vs Experience (Training set)')
plt.xlabel('Years of Experience')
```

```
plt.ylabel('Salary')
plt.show()
```




```
plt.scatter(x_test,y_test,color='red')
plt.plot(x_train,regressor.predict(x_train),color='blue')
plt.title('Salary vs Experience (Test set)')
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.show()
```



RESULT:- Implementation of salary of the employee using linear regression was executed successfully.