Linear Regression

Importing the libraries

```
In [1]: import numpy as np
   import matplotlib.pyplot as plt
   import pandas as pd
```

Importing the dataset

```
In [2]: dataset = pd.read_csv('Salary_Data.csv')
X = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
```

Splitting the dataset into the Training set and Test set

```
In [3]: 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
```

Training the Simple Linear Regression model on the Training set

```
In [4]: from sklearn.linear_model import LinearRegression
    regressor = LinearRegression()
    regressor.fit(X_train, y_train)
```

Out[4]: LinearRegression(copy X=True, fit intercept=True, n jobs=None, normalize=False)

Predicting the Test set results

```
In [5]: y_pred = regressor.predict(X_test)
```

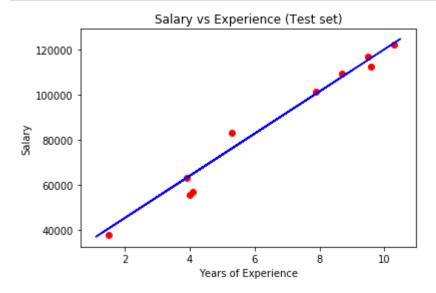
Visualising the Training set results

```
In [6]: 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()
```



Visualising the Test set results

```
In [7]: 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()
```



```
In [ ]:
```