Simple Linear Regression

Importing the libraries

In [0]:

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

Importing the dataset

In [0]:

```
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 [0]:

```
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
= 0)
```

Training the Simple Linear Regression model on the Training set

In [6]:

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

Out[6]:

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

Predicting the Test set results

In [0]:

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

In [9]:

```
print(y_pred)
```

```
[ 40835.10590871 123079.39940819  65134.55626083  63265.36777221
 115602.64545369 108125.8914992  116537.23969801  64199.96201652
  76349.68719258 100649.1375447 ]
```

Visualising the Training set results

In [11]:

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

Visualising the Test set results

In [12]:

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