```python
In [4]: # Built simple Linear regression Model
        import os
        import numpy as np
        import matplotlib.pyplot as plt
        import pandas as pd
```

```python
In [5]: os.chdir("D:/My ML Simulations/My_ML_Work/Part 2 - Regression/Section 4 - Simple Linear Regression")
```

```python
In [6]: # Importing the dataset
        dataset = pd.read_csv('Salary_Data.csv')
        X = dataset.iloc[:, :-1].values
        y = dataset.iloc[:, 1].values
```

```python
In [7]: # Splitting the dataset into the Training set and Test set
        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)
```

```python
In [8]: # Feature Scaling
        """from sklearn.preprocessing import StandardScaler
        sc_X = StandardScaler()
        X_train = sc_X.fit_transform(X_train)
        X_test = sc_X.transform(X_test)
        sc_y = StandardScaler()
        y_train = sc_y.fit_transform(y_train.reshape(-1,1))"""
```

```
Out[8]: 'from sklearn.preprocessing import StandardScaler\nsc_X = StandardScaler()\nX_train = sc_X.fit_transform(X_train)\nX_test = sc_
        X.transform(X_test)\nsc_y = StandardScaler()\ny_train = sc_y.fit_transform(y_train.reshape(-1,1))'
```

```python
In [9]: # Fitting Simple Linear Regression to the Training set
        from sklearn.linear_model import LinearRegression
        regressor = LinearRegression()
        regressor.fit(X_train, y_train)
```

```
Out[9]: LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None, normalize=False)
```

```python
In [10]: # Predicting the Test set results
         y_pred = regressor.predict(X_test)
```

In [13]:
```python
# Visualising the Training set results
plt.scatter(X_train, y_train, color = 'green')
plt.plot(X_train, regressor.predict(X_train), color = 'red')
plt.title('Salary vs Experience (Training set)')
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.show()
```


In [12]:
```python
# Visualising the Test set results
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()
```