In [7]:

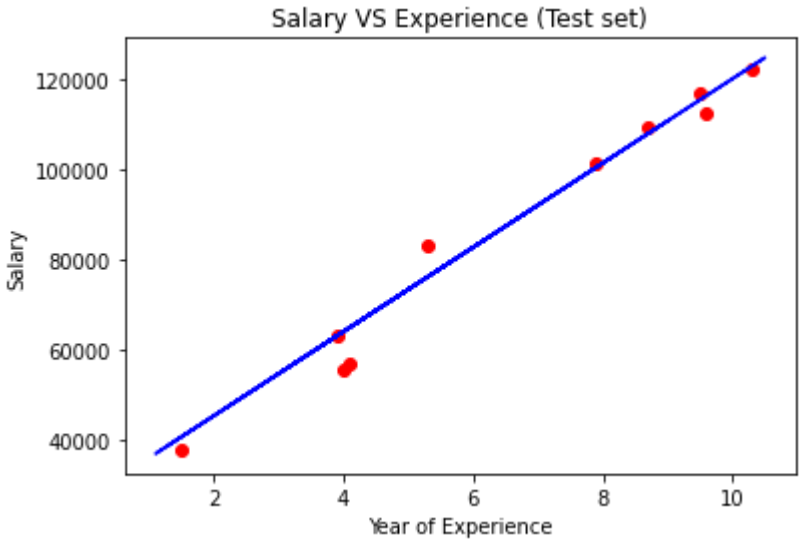
```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
dataset = pd.read_csv('salary_data.csv')
X = dataset.iloc[:, :-1].values #get a copy of dataset exclude last column
y = dataset.iloc[:, 1].values #get array of dataset in column 1st

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

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

viz_train = plt
viz_train.scatter(X_train, y_train, color='red')
viz_train.plot(X_train, regressor.predict(X_train), color='blue')
viz_train.title('Salary VS Experience (Training set)')
viz_train.xlabel('Year of Experience')
viz_train.ylabel('Salary')
viz_train.show()

viz_test = plt
viz_test.scatter(X_test, y_test, color='red')
viz_test.plot(X_train, regressor.predict(X_train), color='blue')
viz_test.title('Salary VS Experience (Test set)')
viz_test.xlabel('Year of Experience')
viz_test.ylabel('Salary')
viz_test.show()
```



In [18]:
```
y_pred = regressor.predict(np.array([5]).reshape(1,1))
print(y_pred)
space = "     "
y_pred2 = regressor.predict(X_test)
print("Experience Year" + " " + "Salary Earned")
for i in range(len(X_test)):
    print(X_test[i][0] , space , y_pred2[i])
```

```
[73545.90445964]
Experience Year Salary Earned
1.5       40835.105908714744
10.3       123079.39940819162
4.1       65134.556260832906
3.9       63265.36777220843
9.5       115602.64545369372
8.7       108125.89149919583
9.6       116537.23969800596
4.0       64199.96201652067
5.3       76349.68719257976
7.9       100649.13754469794
```

In [22]:
```
data = [[17], [12], [5.5],[8.3], [24.5], [3.6] ,[13.5]]
print(data)
predicted_salary = regressor.predict(data)
print(predicted_salary)
```

```
[[17], [12], [5.5], [8.3], [24.5], [3.6], [13.5]]
[185697.21377711 138967.5015615   78218.8756812  104387.51452195
 255791.78210053  60461.58503927 152986.41522618]
```

In [23]:
```
print("Samarthya Gupta, IIT Delhi")
```

```
Samarthya Gupta, IIT Delhi
```

In [ ]: