In [10]:
```python
import numpy as np
```

In [9]:
```python
import matplotlib.pyplot as plt
```

In [7]:
```python
import pandas as pd
```

In [22]:
```python
from sklearn.metrics import f1_score,r2_score, precision_score, recall_score, confus
```

In [26]:
```python
dataset = pd.read_csv("D:\\ML Lab\\Regression\\Simple Linear Regression\\Salary_Data
X = dataset.iloc[:, :-1].values
y = dataset.iloc[:, 1].values
```

In [13]:
```python
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_st
```

In [14]:
```python
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(X_train, y_train)
```

Out[14]:
```
▾ LinearRegression

LinearRegression()
```

In [15]:
```python
y_pred = regressor.predict(X_test)
```

In [16]:
```python
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()
```

Salary vs Experience (Training set)

In [17]:
```python
plt.plot(y_pred, y_test)
```

Out[17]: [<matplotlib.lines.Line2D at 0x1983ca473a0>]
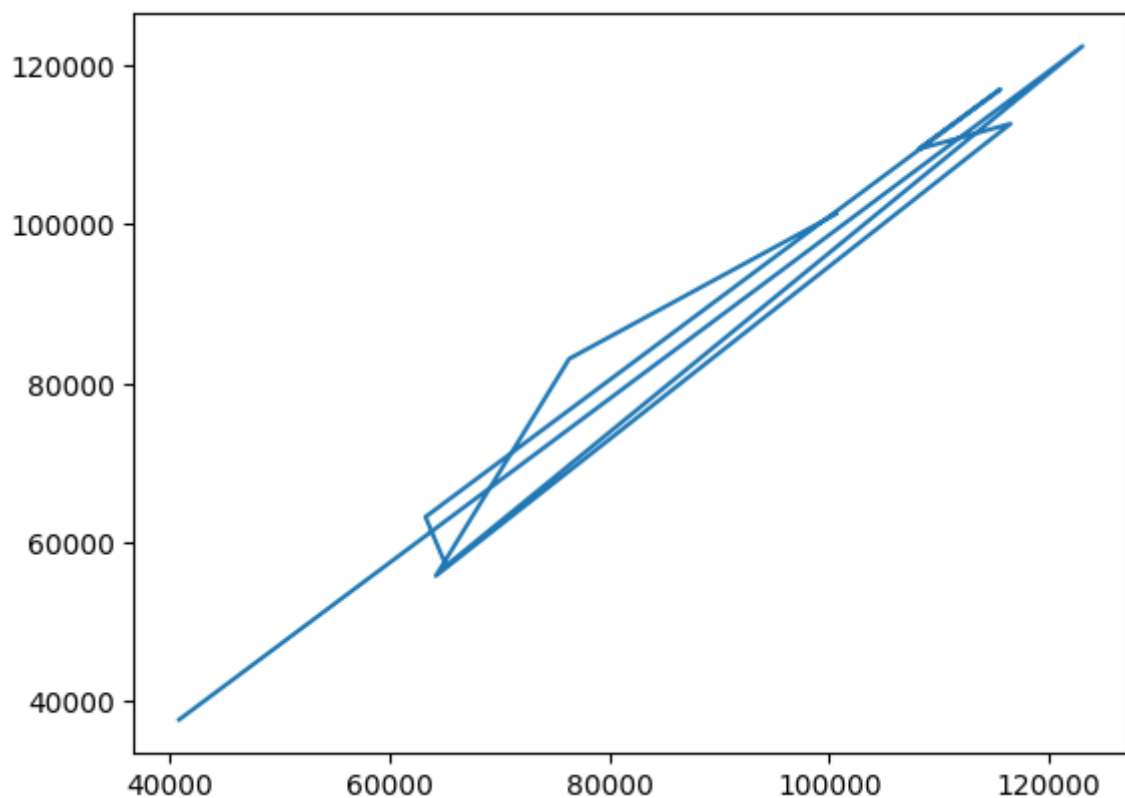
In [18]:
```python
plt.scatter(X_test, y_test, color = 'red')
plt.plot(X_train, regressor.predict(X_train), color = 'blue')
plt.title('Salary vs Experience (Test set)')
```

```
plt.xlabel('Years of Experience')
plt.ylabel('Salary')
plt.show()
```


Salary vs Experience (Test set)

In [23]:
```
mse = mean_squared_error(y_test, y_pred)
r2 = r2_score(y_test, y_pred)
```

In [24]:
```
print("Mean Squared Error:", mse)
print("R2 Score:", r2)
```

```
Mean Squared Error: 21026037.329511296
R2 Score: 0.9749154407708353
```