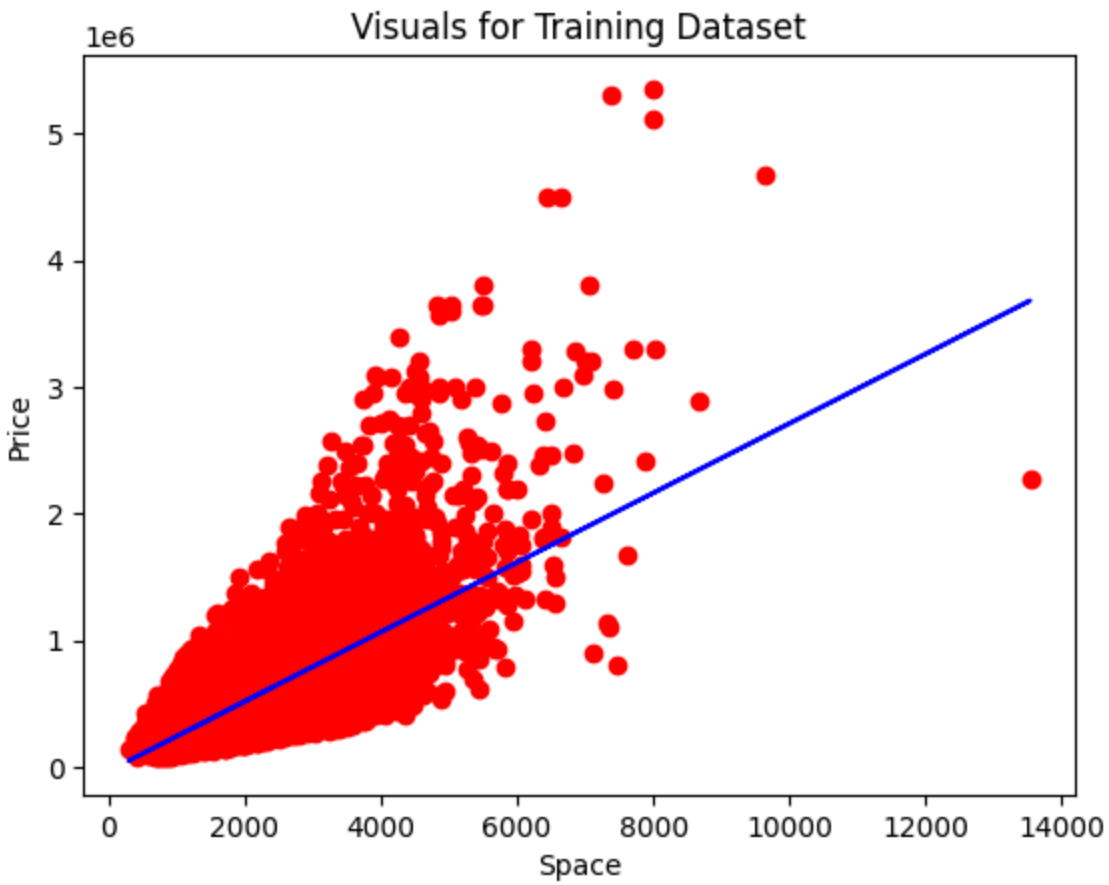
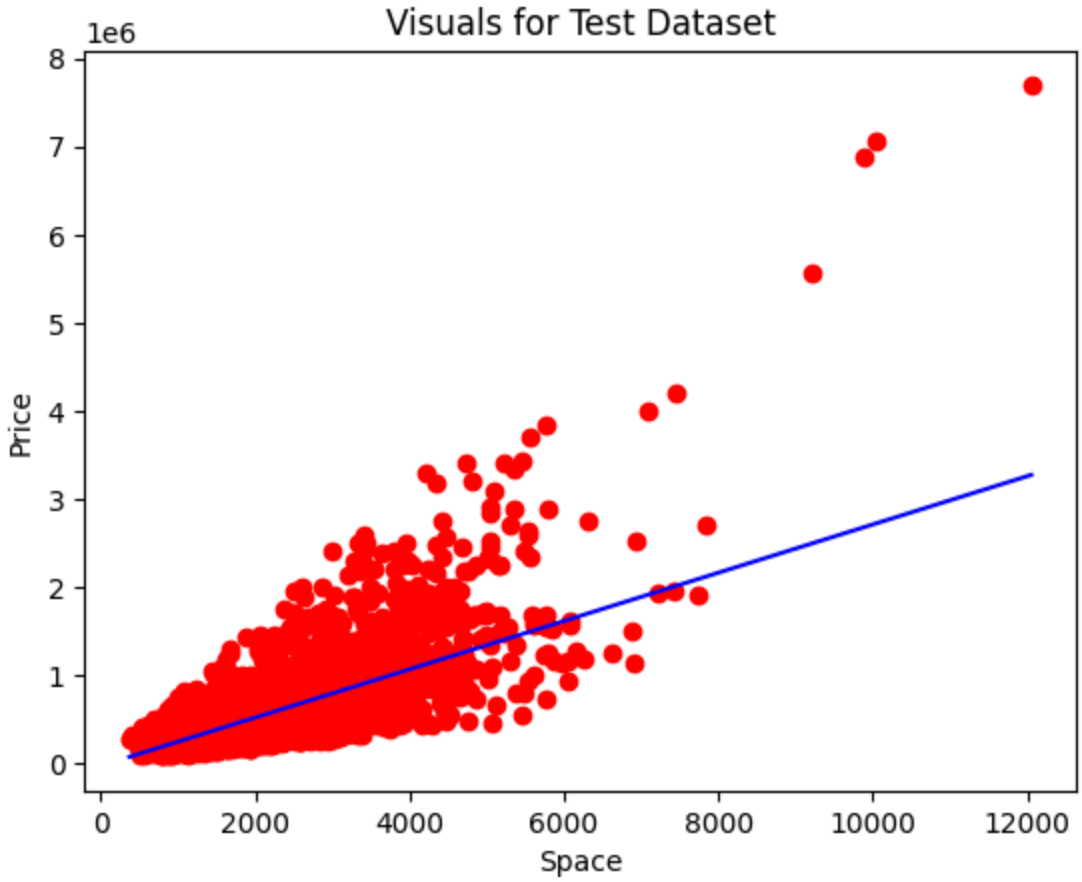
In [7]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

# Avoid overflow when printing arrays
np.set_printoptions(threshold=np.inf)

# Importing DataSet
dataset = pd.read_csv(r"C:\Users\admin\Downloads\22nd, 23rd- slr (1)\22nd, 23rd- sl

space = dataset['sqft_living']
price = dataset['price']

x = np.array(space).reshape(-1, 1)
y = np.array(price)

# Splitting the data into Train and Test
from sklearn.model_selection import train_test_split
xtrain, xtest, ytrain, ytest = train_test_split(x, y, test_size=1/3, random_state=0

# Fitting simple linear regression to the Training Set
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(xtrain, ytrain)

# Predicting the prices
pred = regressor.predict(xtest)

# Visualizing the training set results
plt.scatter(xtrain, ytrain, color='red')
plt.plot(xtrain, regressor.predict(xtrain), color='blue')
plt.title("Visuals for Training Dataset")
plt.xlabel("Space")
plt.ylabel("Price")
plt.show()

# Visualizing the test set results
plt.scatter(xtest, ytest, color='red')

# Sort xtest for a clean regression line
xtest_sorted = np.sort(xtest, axis=0)
pred_sorted = regressor.predict(xtest_sorted)

plt.plot(xtest_sorted, pred_sorted, color='blue')
plt.title("Visuals for Test Dataset")
plt.xlabel("Space")
plt.ylabel("Price")
plt.show()

from sklearn.metrics import r2_score, mean_absolute_error, mean_squared_error

# Model equation
print("Coefficient (slope):", regressor.coef_[0])
print("Intercept:", regressor.intercept_)
```

```
# Accuracy
print("R² Score:", r2_score(ytest, pred))

# Errors
print("Mean Absolute Error (MAE):", mean_absolute_error(ytest, pred))
print("Mean Squared Error (MSE):", mean_squared_error(ytest, pred))
print("Root Mean Squared Error (RMSE):", np.sqrt(mean_squared_error(ytest, pred)))
```






```
Coefficient (slope): 273.9784251344825
Intercept: -29315.417822497082
R² Score: 0.5000521542544756
Mean Absolute Error (MAE): 172762.49067464404
Mean Squared Error (MSE): 72251932678.75192
Root Mean Squared Error (RMSE): 268797.1961884125
```