

In [15]:

```
# Lab-8 House price prediction using Linear Regression**
import pandas as pd
from sklearn.linear_model import LinearRegression
import matplotlib.pyplot as plt
dataset = pd.read_csv('dataset.csv')
print(dataset.shape)
print(dataset.head(5))
#Visualize the data
```

(1460, 2)

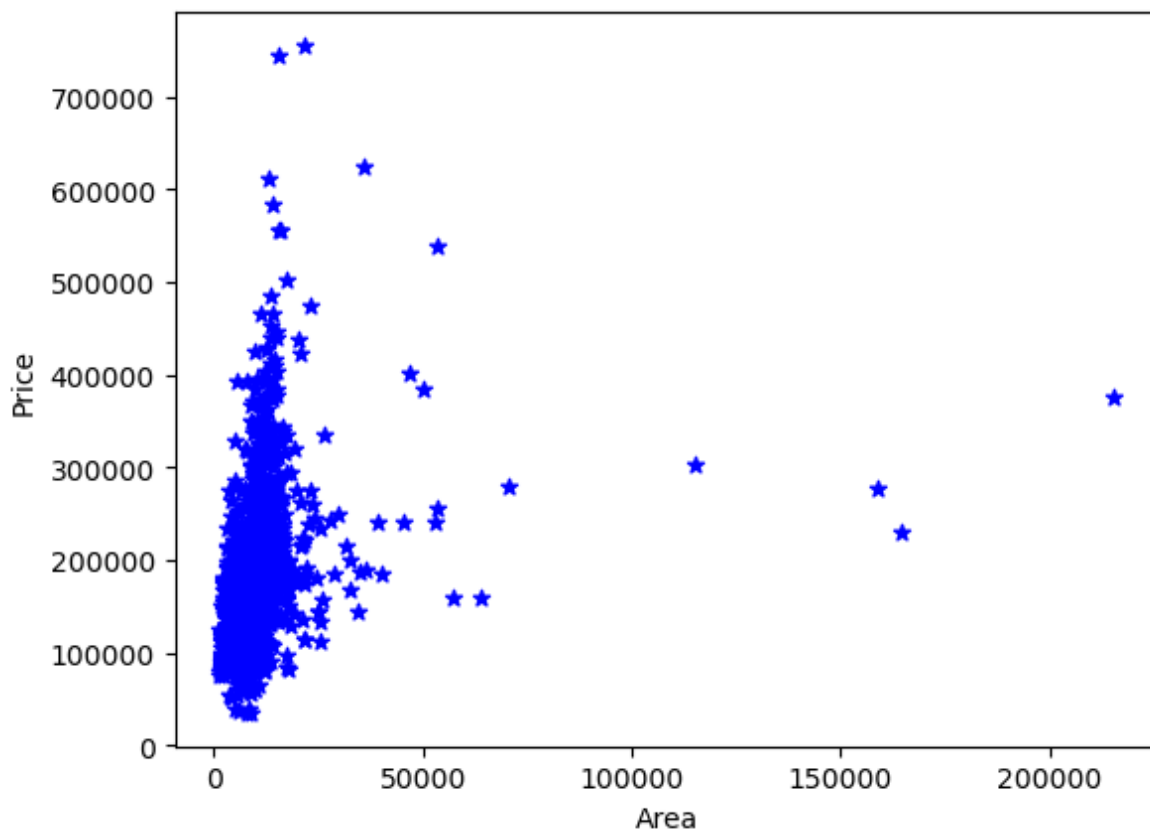
	area	price
0	8450	208500
1	9600	181500
2	11250	223500
3	9550	140000
4	14260	250000

In [16]:

```
plt.xlabel('Area')
plt.ylabel('Price')
plt.scatter(dataset.area,dataset.price,color='blue',marker='*')
```

Out[16]:

<matplotlib.collections.PathCollection at 0x23f38efefa0>



In [9]:

```
X = dataset['area']  
X = dataset.drop('price',axis='columns')  
X
```

Out[9]:

	area
0	8450
1	9600
2	11250
3	9550
4	14260
...	...
1455	7917
1456	13175
1457	9042
1458	9717
1459	9937

1460 rows × 1 columns

In [17]:

```
Y = dataset.price  
Y
```

Out[17]:

0	208500
1	181500
2	223500
3	140000
4	250000
...	...
1455	175000
1456	210000
1457	266500
1458	142125
1459	147500

Name: price, Length: 1460, dtype: int64

In [18]:

```
#Training Dataset using Linear Regression
model = LinearRegression()
model.fit(X,Y)
#Predicted Price for Land sq.Feet of custom values
x=40000
LandAreainSqFt=[[x]]
PredictedmodelResult = model.predict(LandAreainSqFt)
print(PredictedmodelResult)
```

[242835.02996518]

C:\Users\pooja\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning:
X does not have valid feature names, but LinearRegression was fitted with fe
ature names
warnings.warn(

In [19]:

```
#Coefficient - m
m=model.coef_
#Intercept - b
b=model.intercept_
#x is Independant variable - Input - area
y = m*x + b
print("The Price of {0} Square feet Land is: {1}".format(x,y))
```

The Price of 40000 Square feet Land is: [242835.02996518]

In []: