```
#import
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn import linear_model
```

```
#importing dataset
data=pd.read_csv('houseprice.csv')
```

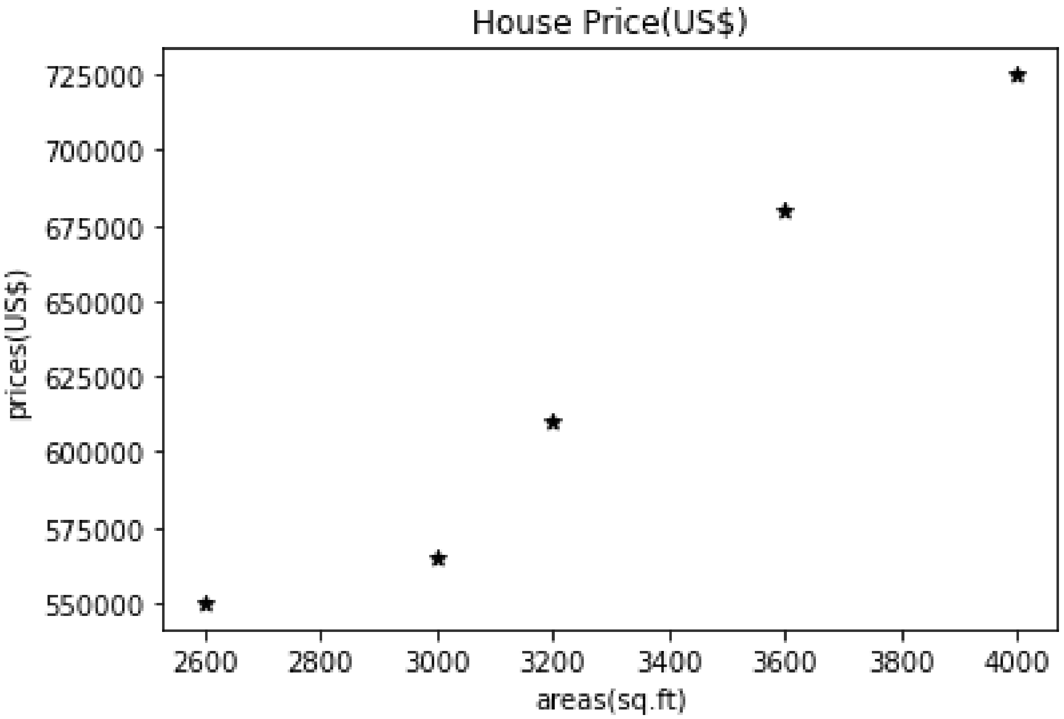
```
data
```

```
   area   price
0  2600  550000
1  3000  565000
2  3200  610000
3  3600  680000
4  4000  725000
```

Representing the data in visually

```
%matplotlib inline
plt.scatter(data.area,data.price,color='black',marker='*')

plt.xlabel('areas(sq.ft)')
plt.ylabel('prices(US$)')
plt.title('House Price(US$)')
plt.show()
```



```
df=data.drop('price',axis='columns')
```

```
df
```

```
   area
0  2600
1  3000
2  3200
3  3600
4  4000
```

```
price=data.price
price
```

```
0    550000
1    565000
2    610000
3    680000
4    725000
Name: price, dtype: int64
```

```
# Create linear regression object
reg = linear_model.LinearRegression()
reg.fit(df,price)
```

```
LinearRegression()
```

Predict price of a home with area = 3300 sqr ft

```
reg.predict([[3300]])
```

```
C:\Python\anaconda\lib\site-packages\sklearn\base.py:450: UserWarning: 
X does not have valid feature names, but LinearRegression was fitted 
with feature names
  warnings.warn(
```

```
array([628715.75342466])
```

```
reg.coef_
```

```
array([135.78767123])
```

```
reg.intercept_
```

```
180616.43835616432
```

To find price for paticular area, Y=mx+c ,Here m = coefficient and c = intercept

```
#finding price for area=3300

135.78767123*3300+180616.43835616432
```

```
628715.7534151643
```

```
#here both are same as we predicted as we get by ml model
```

```
#import some another areas
d=pd.read_csv('areas.csv')
```

```
d
```

```
   area
0  3498
1  4322
2  5647
3  5425
4  2355
5  1323
6  4500
7  2300
8  5678
9  5600
```

```
#predict their prices
p=reg.predict(d)
p
```

```
array([655601.71232877, 767490.75342466, 947409.41780822,
917264.55479452,
       500396.40410959, 360263.52739726, 791660.95890411,
492928.08219178,
       951618.83561644, 941027.39726027])
```

```
#now the prices for each areas if found
d['prices']=p
d
```

```
   area         prices
0  3498  655601.712329
1  4322  767490.753425
2  5647  947409.417808
3  5425  917264.554795
4  2355  500396.404110
5  1323  360263.527397
6  4500  791660.958904
7  2300  492928.082192
```

```
8  5678  951618.835616
9  5600  941027.397260
```