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In [1]:
```
import pandas as pd
df=pd.read_csv("ML0.csv")
```

In [2]:
```
df
```

Out[2]:

	Area	Price
0	2600	550000
1	3000	565000
2	3200	610000
3	3600	680000
4	4000	725000

In [4]:
```
import matplotlib.pyplot as plt
from sklearn import linear_model
%matplotlib inline
plt.xlabel("Area")
plt.ylabel("Price")

plt.scatter(df.Area,df.Price,marker="*")
```

Out[4]:
```
<matplotlib.collections.PathCollection at 0x1343b2f8>
```

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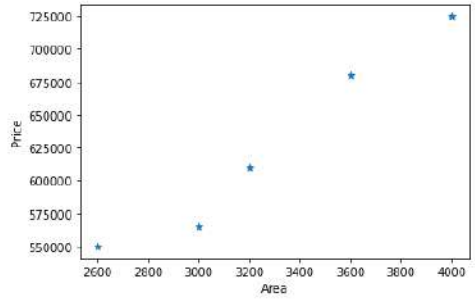
In [4]:
```
import matplotlib.pyplot as plt
from sklearn import linear_model
%matplotlib inline
plt.xlabel("Area")
plt.ylabel("Price")

plt.scatter(df.Area,df.Price,marker="*")
```

Out[4]: <matplotlib.collections.PathCollection at 0x1343b2f8>



In [5]:
```
reg=linear_model.LinearRegression()
reg.fit(df[["Area"]],df.Price)
```

Out[5]: LinearRegression()

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In [15]:
```
reg.predict([[3300]])
```

Out[15]:
```
array([628715.75342466])
```

In [16]:
```
reg.coef_
```

Out[16]:
```
array([135.78767123])
```

In [17]:
```
reg.intercept_
```

Out[17]:
```
180616.43835616432
```

In [18]:
```
reg.predict([[4000]])
```

Out[18]:
```
array([723767.12328767])
```

In [24]:
```
import matplotlib.pyplot as plt
from sklearn import linear_model
%matplotlib inline
plt.xlabel("Area")
plt.ylabel("Price")

plt.scatter(df.Area,df.Price,marker="*")
plt.plot(df.Area,reg.predict(df[["Area"]]))
```

Out[24]:
```
[<matplotlib.lines.Line2D at 0x15914a8>]
```

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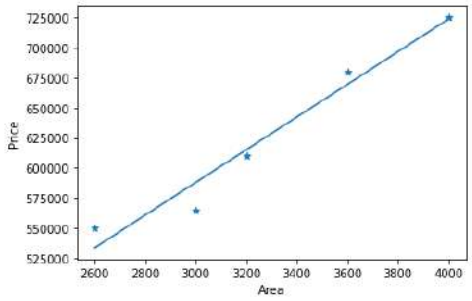
In [24]:
```
import matplotlib.pyplot as plt
from sklearn import linear_model
%matplotlib inline
plt.xlabel("Area")
plt.ylabel("Price")

plt.scatter(df.Area,df.Price,marker="*")
plt.plot(df.Area,reg.predict(df[["Area"]]))
```

Out[24]: [<matplotlib.lines.Line2D at 0x15914a8>]



In [26]:
```
d=pd.read_csv("ML1.csv")
```

In [27]:
```
d
```

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In [29]:
```
p=reg.predict(d[["Area"]])
```

In [30]:
```
p
```

Out[30]:
```
array([452191.78082192, 494557.53424658, 643923.97260274, 657095.37671233,
       683030.82191781, 723767.12328767])
```

In [31]:
```
d["Price"]=p
```

In [32]:
```
d
```

Out[32]:

	Area	Price
0	2000	452191.780822
1	2312	494557.534247
2	3412	643923.972603
3	3509	657095.376712
4	3700	683030.821918
5	4000	723767.123288

In [34]:
```
d.to_csv("ML2.csv",index=False)
```

In [35]:
```
d
```

Out[35]:

	Area	Price

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In [39]:
```
ex=pd.read_csv("ML3.csv")
```

In [40]:
```
ex
```

Out[40]:

	year	income
0	1970	3399.299037
1	1971	3768.297935
2	1972	4251.175484
3	1973	4804.463248
4	1974	5576.514583
5	1975	5998.144346
6	1976	7062.131392
7	1977	7100.126170
8	1978	7247.967035
9	1979	7602.912681
10	1980	8355.968120
11	1981	9434.390652
12	1982	9619.438377
13	1983	10416.536590
14	1984	10790.328720
15	1985	11018.955850

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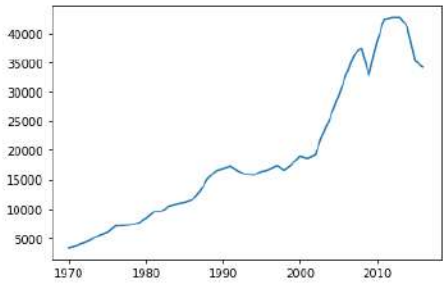
In [41]:
```
plt.plot(ex.year,ex.income)
```

Out[41]:
```
[<matplotlib.lines.Line2D at 0x1558ad8>]
```



In [42]:
```
plt.scatter(ex.year,ex.income)
```

Out[42]:
```
<matplotlib.collections.PathCollection at 0xa4fa18>
```

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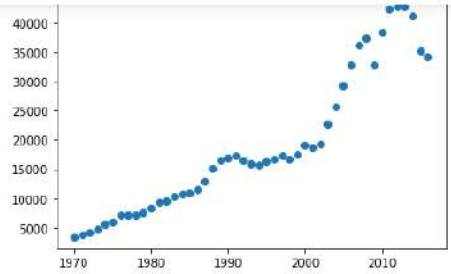

In [44]:
```
rr=linear_model.LinearRegression()
```

In [46]:
```
rr.fit(ex[["year"]],ex["income"])
```

Out[46]:
```
LinearRegression()
```

In [47]:
```
rr.predict([[2020]])
```

Out[47]:
```
array([41288.69409442])
```

In [49]:
```
plt.xlabel("Year")
plt.ylabel("Per Capita Income (US$)")
plt.scatter(ex.year,ex.income)
plt.plot(ex.year,rr.predict(ex[["year"]]))
```

Out[49]:
```
[<matplotlib.lines.Line2D at 0x4d76628>]
```

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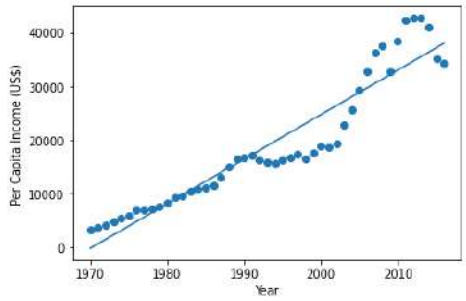
Out[49]: [<matplotlib.lines.Line2D at 0x4d76628>]



In [50]:
```
rr.predict([[2020]])
```

Out[50]: array([41288.69409442])

In [ ]:

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