In [74]:
```
from pandas import Series, DataFrame

import numpy as np

import string
import re
import matplotlib.pyplot as plt
from matplotlib.pyplot import rcParams

%matplotlib inline
from collections import Counter
```

In [75]:
```
import keras
```

In [76]:
```
from csv import reader
from datetime import datetime
```

In [77]:
```
import pandas as pd
import json
import sys
import warnings
```

In [78]:
```
import sklearn
from sklearn import datasets, linear_model
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.ensemble import RandomForestClassifier, BaggingClassifier
from sklearn.linear_model import LinearRegression
```

In [79]:
```
df = ("C:\\Users\\orlan\Rent_Orlando_10years.csv")
```

In [80]:
```
data1 = pd.read_csv(df)
```

In [81]:
```
print (data1)
```

```
      Month  Two_beds  One_beds
0    11-Jan       907       718
1    11-Feb       903       708
2    11-Mar       913       725
3    11-Apr       904       717
4    11-May       899       705
..      ...       ...       ...
103  20-Jan      1407      1223
104  20-Mar      1402      1229
105  20-Apr      1366      1195
106  20-May      1426      1253
107  20-Jun      1427      1257

[108 rows x 3 columns]
```

In [82]:
```
data1.describe()
```

Out[82]:

	Two_beds	One_beds
count	108.000000	108.000000
mean	1185.203704	1016.064815
std	194.894688	189.793605
min	891.000000	684.000000
25%	983.000000	835.500000
50%	1221.000000	1015.000000
75%	1340.250000	1175.250000
max	1488.000000	1312.000000

In [83]:
```
data1.min()
```

Out[83]:
```
Month       11-Apr
Two_beds       891
One_beds       684
dtype: object
```

In [84]:
```
data1.max()
```

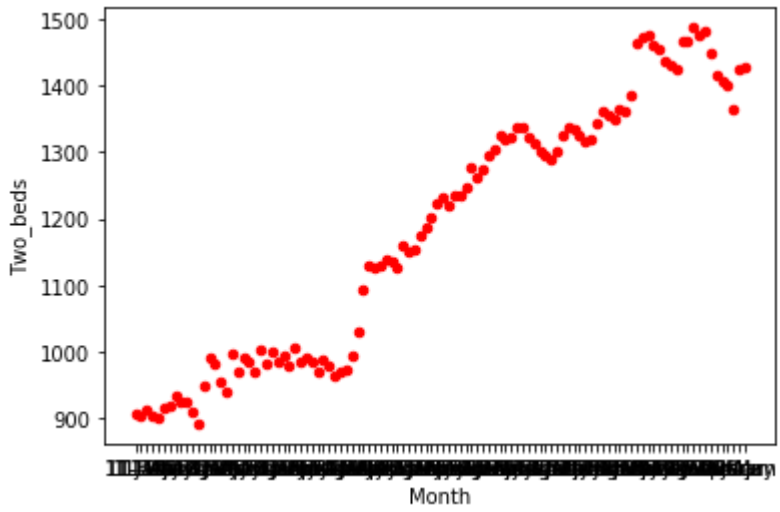
Out[84]:
```
Month       20-May
Two_beds      1488
One_beds      1312
dtype: object
```

In [ ]:
```

```

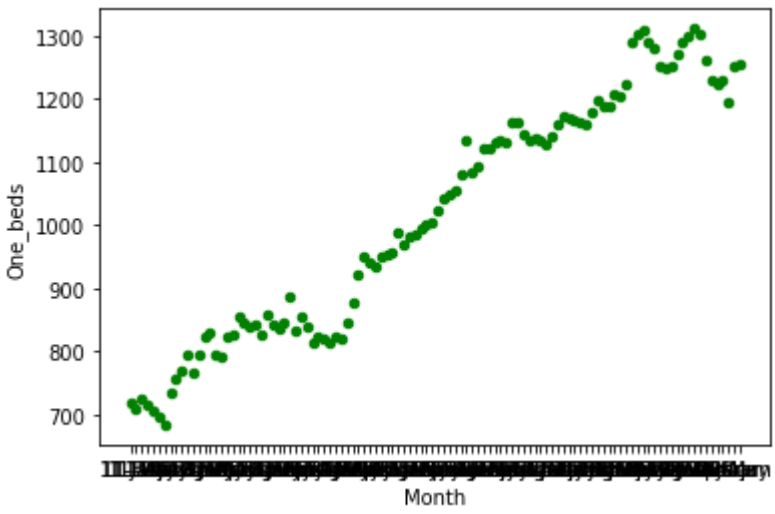
In [86]:
```
data1.plot(kind='scatter', x='Month', y='Two_beds', c=['red'])
```

Out[86]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x2966fefbac8>
```



In [87]:
```
data1.plot(kind='scatter', x='Month', y='One_beds', c=['green'])
```

Out[87]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x2967003cdc8>
```



In [88]:
```
import scipy
import math
```

In [89]:
```
linreg = LinearRegression()
```

In [90]:
```
Two_beds = np.array([907,903,913,904,899,914,919,933,925,923,909,891,949,991,9
81,954,939,997,968,989,983,970,1003,982,1000,983,994,979,1006,983,991,985,968,
986,977,962,968,973,994,1031,1092,1128,1125,1130,1139,1135,1125,1160,1149,1153
,1175,1188,1202,1223,1232,1219,1234,1236,1248,1278,1261,1275,1295,1304,1326,13
20,1322,1339,1338,1322,1313,1303,1294,1289,1303,1326,1337,1336,1327,1318,1320,
1344,1363,1357,1351,1365,1362,1387,1465,1475,1476,1462,1457,1438,1432,1426,146
7,1469,1488,1477,1484,1448,1416,1407,1402,1366,1426,1427])
```

In [94]:
```
One_beds = np.array([718,708,725,717,705,698,684,734,758,770,794,766,796,823,8
31,794,793,824,826,856,847,839,841,827,857,842,836,846,887,834,854,838,815,824
,821,815,823,820,847,879,921,952,942,936,951,955,956,989,969,981,986,994,1000,
1006,1024,1043,1049,1056,1081,1134,1085,1095,1121,1122,1133,1135,1131,1162,116
3,1143,1134,1137,1134,1128,1140,1160,1174,1169,1166,1164,1160,1179,1199,1189,1
189,1207,1204,1224,1290,1303,1309,1291,1282,1253,1248,1251,1271,1289,1301,1312
,1303,1262,1229,1223,1229,1195,1253,1257])
```

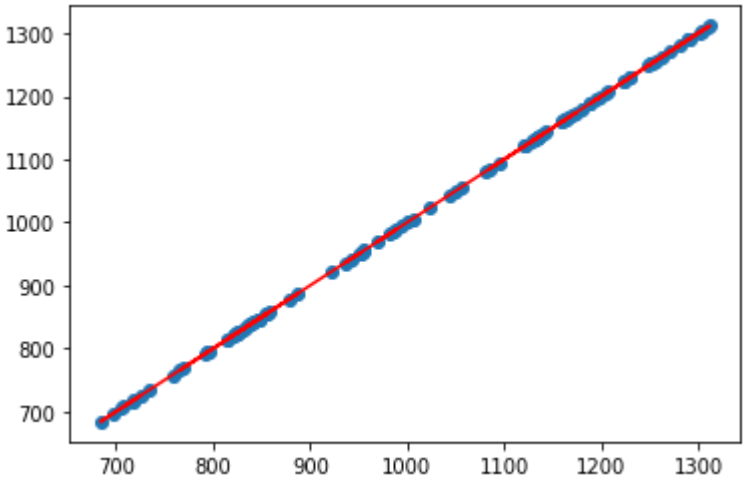
In [95]:
```
Two_beds = Two_beds.reshape(-1, 1)
```

In [96]:
```
linreg.fit(Two_beds, One_beds)
```

Out[96]:
```
LinearRegression(copy_X=True, fit_intercept=True, n_jobs=None, normalize=Fals
e)
```

In [97]:
```
One_beds_pred = linreg.predict(Two_beds)
```

In [98]:
```
plt.scatter(Two_beds,One_beds)
plt.plot(Two_beds, One_beds_pred, color='red')
plt.show()
```



In [ ]:
```
```