Week 6 Assignment - Philly's Housing Issue

Create a horizontal bar chart which helps show the issue plaguing Philadelphia's housing market compared to other big cities across the United States.

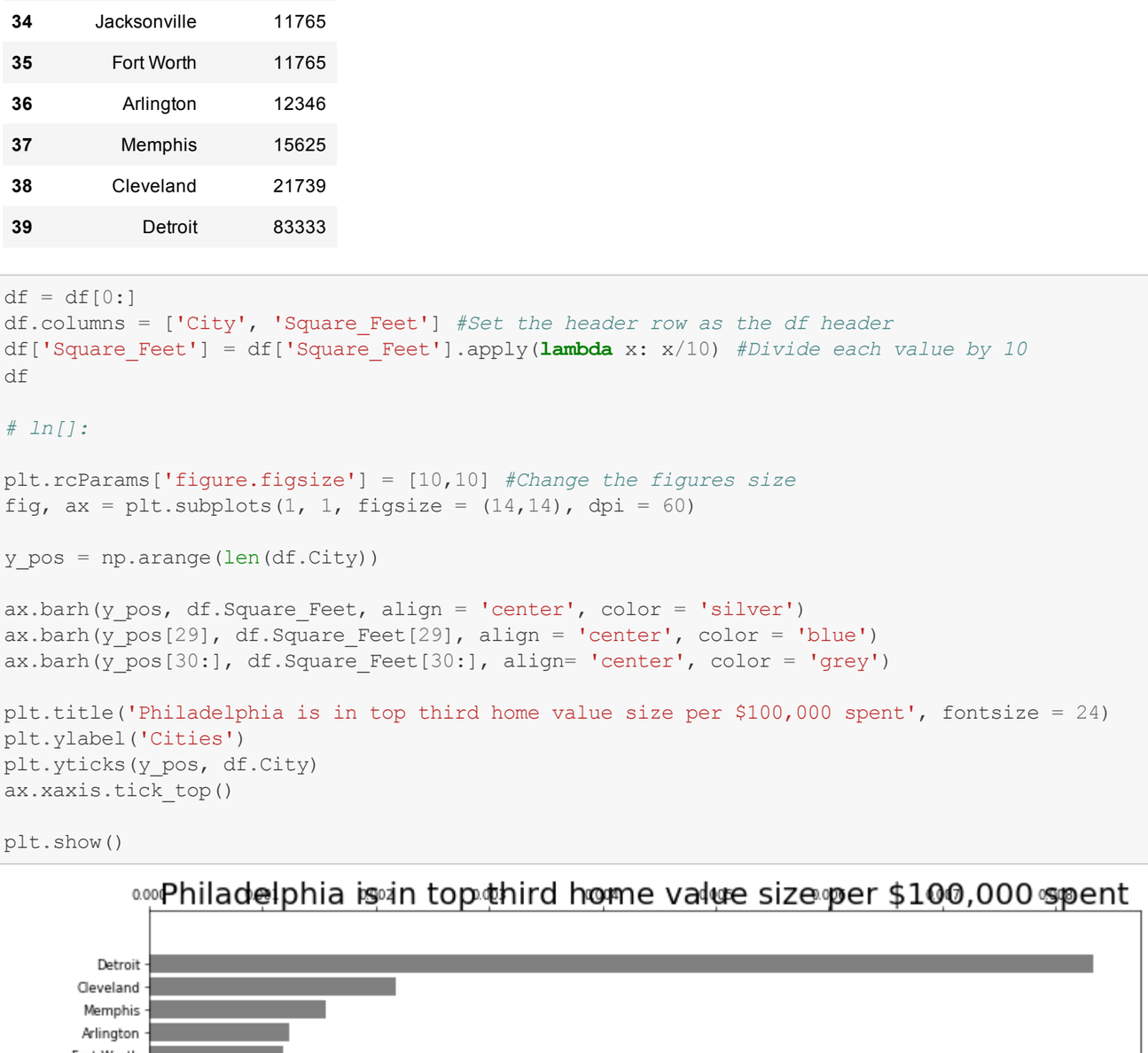
In [1]:
```
# Import Packages
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
from matplotlib.pyplot import figure
from pandas import ExcelWriter
from pandas import ExcelFile
%matplotlib inline
```

In [2]:
```
# Import & Clean up data
df = pd.read_excel('C:\\Users\\zadai\\OneDrive\\Documents\\Data Science School Documents\\MSDS 670 Visualizations\\Week 6\\Week_6_Homework_Data.xlsx')
df.columns = df.iloc[0]
df = df.drop(df.index[0])
df.columns = df.columns.astype(str)
df
```

Out[2]:

	City	Square_Feet
1	San Francisco	1502
2	Boston	2092
3	Washington	2198
4	New York	2358
5	Los Angeles	2375
6	San Diego	2899
7	Long Beach	2933
8	Oakland	3460
9	Seattle	3472
10	Denver	5025
11	Austin	5128
12	Miami	5291
13	Portland	5348
14	Charleston	5917
15	Chicago	6173
16	Minneapolis	6536
17	Sacramento	6579
18	Atlanta	6849
19	Dallas	7042
20	Baltimore	7692
21	Phoenix	7937
22	Nashville	8130
23	Fresno	8264
24	Mesa	8403
25	Tucson	8772
26	Colorado Springs	8850
27	Raleigh	8850
28	Las Vegas	9259
29	Philadelphia	9346
30	Charlotte	10204
31	San Antonio	10526
32	Huston	10753
33	New Orleans	11364
34	Jacksonville	11765
35	Fort Worth	11765
36	Arlington	12346
37	Memphis	15625
38	Cleveland	21739
39	Detroit	83333

In [9]:
```
df = df[0:]
df.columns = ['City', 'Square_Feet'] #Set the header row as the df header
df['Square_Feet'] = df['Square_Feet'].apply(lambda x: x/10) #Divide each value by 10
df

# In[]:

plt.rcParams['figure.figsize'] = [10,10] #Change the figures size
fig, ax = plt.subplots(1, 1, figsize = (14,14), dpi = 60)

y_pos = np.arange(len(df.City))

ax.barh(y_pos, df.Square_Feet, align = 'center', color = 'silver')
ax.barh(y_pos[29], df.Square_Feet[29], align = 'center', color = 'blue')
ax.barh(y_pos[30:], df.Square_Feet[30:], align= 'center', color = 'grey')

plt.title('Philadelphia is in top third home value size per $100,000 spent', fontsize = 24)
plt.ylabel('Cities')
plt.yticks(y_pos, df.City)
ax.xaxis.tick_top()

plt.show()
```



Reflection

The housing issue that Philadelphia has can be thought of in two ways. It can be an issue for home owners because per square footage of their homes their value is on the lower end and isn't appreciating very quickly. On the other end, this is the kind of market that is cheaper for first time home buyers to get into homes much easier and don't have to put down as big of a