```
C:\Users\xiang\Desktop\Part3>python ScriptRunCMD.py
...Importing module scraper...
...Importing module apifunction...
...Importing module fromstringtoint...
This is a real-time dataset scraped from Zillow:
                                              name   floorSize       price
0        15455 Glenoaks Blvd SPACE 408, Sylmar, CA 91342  2,221 sqft    $399,000
1                11347 Modena Ln, Northridge, CA 91326  2,513 sqft  $1,349,000
2        10240 Camarillo St APT 102, North Hollywood, C...  1,364 sqft    $679,000
3                   3206 W 59th St, Los Angeles, CA 90043  1,717 sqft  $1,049,000
4            13691 Gavina Ave UNIT 456, Sylmar, CA 91342  1,800 sqft    $230,000
..                                             ...         ...         ...
194               5158 Veronica St, Los Angeles, CA 90008  1,894 sqft  $1,650,000
195               11850 N Park Ave, Los Angeles, CA 90066  1,515 sqft  $1,645,000
196   15050 Sherman Way UNIT 181, Los Angeles, CA 91405  1,136 sqft    $459,000
197               14725 Sherman Way, Van Nuys, CA 91405  1,407 sqft    $748,000
198               12504 Kling St, Studio City, CA 91604  3,211 sqft  $1,795,000

[177 rows x 3 columns]
```

```
This is the real-time scraped data from Zillow combined with coordinates API data:
                                              name   floorSize       price        lat         lng
0        15455 Glenoaks Blvd SPACE 408, Sylmar, CA 91342  2,221 sqft    $399,000  34.323409 -118.469445
1                11347 Modena Ln, Northridge, CA 91326  2,513 sqft  $1,349,000  34.278683 -118.582497
2        10240 Camarillo St APT 102, North Hollywood, C...  1,364 sqft    $679,000  34.157666 -118.353942
3                   3206 W 59th St, Los Angeles, CA 90043  1,717 sqft  $1,049,000  33.987100 -118.328176
4            13691 Gavina Ave UNIT 456, Sylmar, CA 91342  1,800 sqft    $230,000  34.321620 -118.405085
..                                             ...         ...         ...        ...         ...
194               5158 Veronica St, Los Angeles, CA 90008  1,894 sqft  $1,650,000  34.013265 -118.357910
195               11850 N Park Ave, Los Angeles, CA 90066  1,515 sqft  $1,645,000  34.005638 -118.424627
196   15050 Sherman Way UNIT 181, Los Angeles, CA 91405  1,136 sqft    $459,000  34.201385 -118.460766
197               14725 Sherman Way, Van Nuys, CA 91405  1,407 sqft    $748,000  34.200746 -118.453824
198               12504 Kling St, Studio City, CA 91604  3,211 sqft  $1,795,000  34.155730 -118.405279

[177 rows x 5 columns]
```

I saved the dataset as datafromZillow.csv when I did web scraping and API, so the following dataset might be slightly differernt from the real-time one

```
This is the dataset from Zillow and API (on May 10) :
     Unnamed: 0                                    name   floorSize         price        lat         lng
0             0       13691 Gavina Ave UNIT 456, Sylmar, CA 91342  1,800 sqft      $230,000  34.321620 -118.405085
1             1           594 S Mapleton Dr, Los Angeles, CA 90024  56,500 sqft  $165,000,000  34.073182 -118.429019
2             2               2825 Elm St, Los Angeles, CA 90065  1,551 sqft      $929,000  34.098499 -118.232164
3             3   15455 Glenoaks Blvd SPACE 408, Sylmar, CA 91342  2,221 sqft      $399,000  34.323409 -118.469445
4             4       9131 Burnet Ave UNIT 13, North Hills, CA 91343  1,130 sqft      $449,000  34.236181 -118.463315
..          ...                                           ...         ...           ...        ...         ...
174         174       4737 1/2 W Elmwood Ave, Los Angeles, CA 90004  1,605 sqft      $998,000  34.051003 -118.244519
175         175   11855 Goshen Ave APT 103, Los Angeles, CA 90049  1,649 sqft    $1,249,000  34.048398 -118.464179
176         176           233 S Avenue 50, Los Angeles, CA 90042  1,516 sqft      $975,000  34.103227 -118.200718
177         177   20737 Roscoe Blvd UNIT 704, Winnetka, CA 91306  1,580 sqft      $575,000  34.220060 -118.584807
178         178           4145 Tujunga Ave, Studio City, CA 91604  4,367 sqft    $3,750,000  34.143535 -118.378891

[175 rows x 6 columns]
This is the dataset in LA with price per square foot column:
     Unnamed: 0                                    name   floorSize  ...        lat         lng     price_sf
0             0       13691 Gavina Ave UNIT 456, Sylmar, CA 91342     1800  ...  34.321620 -118.405085   127.777778
1             1           594 S Mapleton Dr, Los Angeles, CA 90024    56500  ...  34.073182 -118.429019  2920.353982
2             2               2825 Elm St, Los Angeles, CA 90065     1551  ...  34.098499 -118.232164   598.968407
3             3   15455 Glenoaks Blvd SPACE 408, Sylmar, CA 91342     2221  ...  34.323409 -118.469445   179.648807
4             4       9131 Burnet Ave UNIT 13, North Hills, CA 91343     1130  ...  34.236181 -118.463315   397.345133
..          ...                                           ...      ...  ...        ...         ...          ...
174         174       4737 1/2 W Elmwood Ave, Los Angeles, CA 90004     1605  ...  34.051003 -118.244519   621.806854
175         175   11855 Goshen Ave APT 103, Los Angeles, CA 90049     1649  ...  34.048398 -118.464179   757.428745
176         176           233 S Avenue 50, Los Angeles, CA 90042     1516  ...  34.103227 -118.200718   643.139842
177         177   20737 Roscoe Blvd UNIT 704, Winnetka, CA 91306     1580  ...  34.220060 -118.584807   363.924051
178         178           4145 Tujunga Ave, Studio City, CA 91604     4367  ...  34.143535 -118.378891   858.713075

[175 rows x 7 columns]
```

```
This is the dataset from Kaggle:
                                              name   floorSize        price        lat         lng
0          6036 Moonstone Peak Dr Bakersfield, CA 93313   1,898 sqft      $238,956   35.275806 -119.069890
1                    888 W E St #1803 San Diego, CA 92101   1,276 sqft    $1,449,900   32.715040 -117.170715
2           5535 Ackerfield Ave #26 Long Beach, CA 90805   1,069 sqft      $369,000   33.857777 -118.163666
3             1919 W Coronet Ave #161 Anaheim, CA 92801   1,440 sqft      $150,000   33.852856 -117.948494
4               11186 Berryknoll St San Diego, CA 92126   1,525 sqft      $679,000   32.925060 -117.155810
...                                             ...          ...          ...        ...         ...
2550             1250 E Bell Ave #89R Anaheim, CA 92805      936 sqft      $425,000   33.819378 -117.894360
2551              6083 Cumulus Ln San Diego, CA 92110   1,058 sqft      $499,000   32.767880 -117.183780
2552   Residence 5 Plan in Copper River Ranch by Gra...   4,018 sqft  $1,281,950+   36.904080 -119.752680
2553              441 Gramercy Pl Oakland, CA 94603   1,150 sqft      $470,000   37.730510 -122.181046
2554             2621 Prescott Rd #161 Modesto, CA 95350   1,716 sqft      $119,000   37.680702 -121.031560

[2543 rows x 5 columns]
This is the dataset in CA with price per square foot column:
                                              name   floorSize      price        lat         lng    price_sf
0          6036 Moonstone Peak Dr Bakersfield, CA 93313        1898     238956   35.275806 -119.069890   125.898841
1                    888 W E St #1803 San Diego, CA 92101        1276    1449900   32.715040 -117.170715  1136.285266
2           5535 Ackerfield Ave #26 Long Beach, CA 90805        1069     369000   33.857777 -118.163666   345.182413
3             1919 W Coronet Ave #161 Anaheim, CA 92801        1440     150000   33.852856 -117.948494   104.166667
4               11186 Berryknoll St San Diego, CA 92126        1525     679000   32.925060 -117.155810   445.245902
...                                             ...         ...        ...        ...         ...         ...
2550             1250 E Bell Ave #89R Anaheim, CA 92805         936     425000   33.819378 -117.894360   454.059829
2551              6083 Cumulus Ln San Diego, CA 92110        1058     499000   32.767880 -117.183780   471.644612
2552   Residence 5 Plan in Copper River Ranch by Gra...        4018    1281950   36.904080 -119.752680   319.051767
2553              441 Gramercy Pl Oakland, CA 94603        1150     470000   37.730510 -122.181046   408.695652
2554             2621 Prescott Rd #161 Modesto, CA 95350        1716     119000   37.680702 -121.031560    69.347319

[2543 rows x 6 columns]
Boxplot of price per square foot column in LA dataset:
First show
```
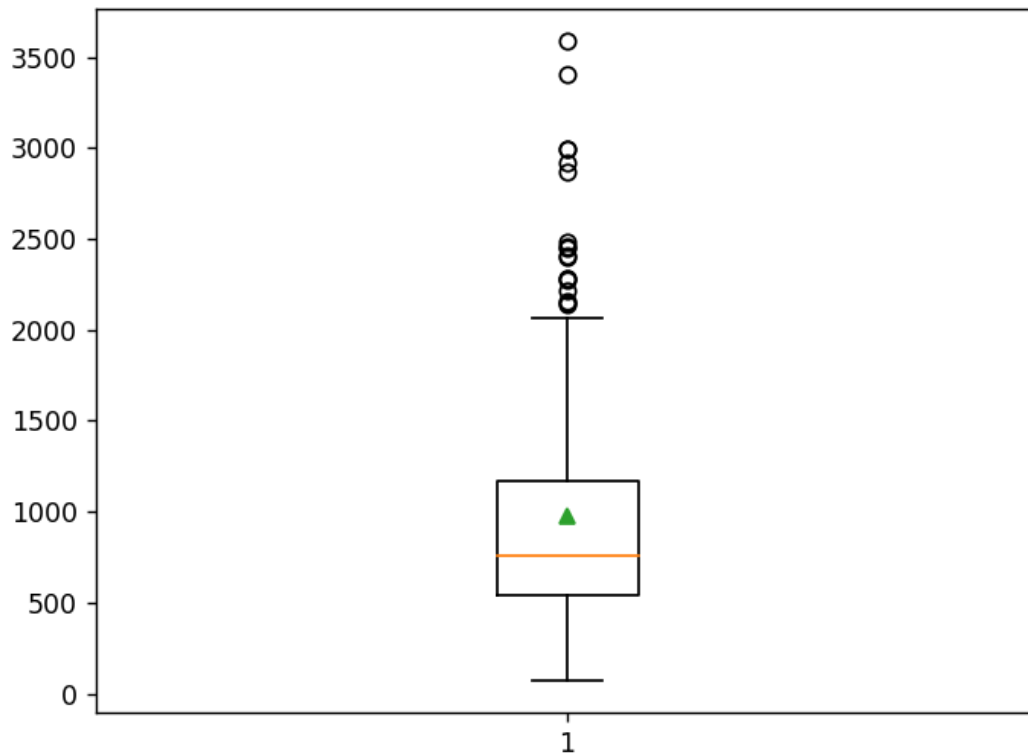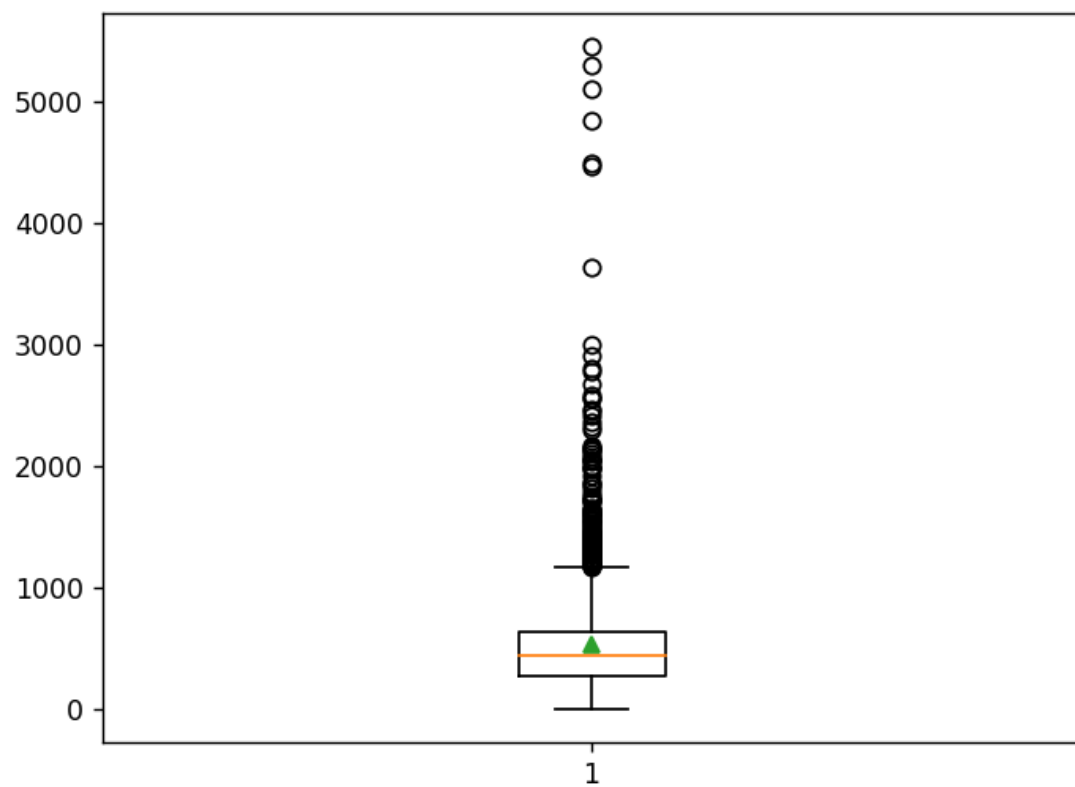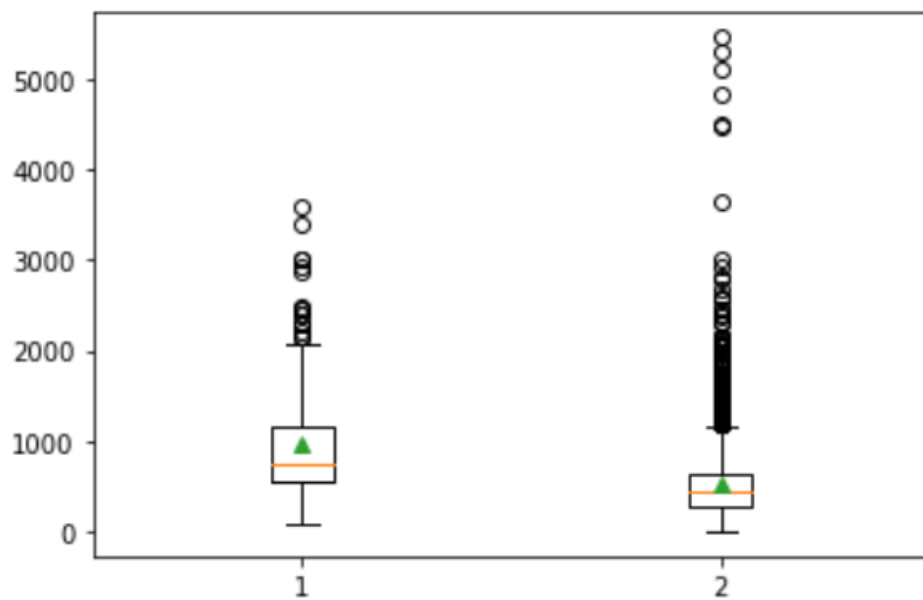


```
Boxplot of price per square foot column in CA dataset:
Second show
```

Show two boxplots in one canvas, the left one shows the price per square foot in LA, and the right one shows the price per square foot in CA. Third show

```
The maximum value of price per square foot in LA is 3588.5387875437627
The maximum value of price per square foot in LA is  71.92
The mean value of price per square foot in LA is  976.5168247199108
The median value of price per square foot in LA is  757.4287446937537
The standard deviation of price per square foot in LA is  669.3507624199301
The maximum value of price per square foot in CA is 5452.88197621226
The maximum value of price per square foot in CA is  3.961267605633803
The mean value of price per square foot in CA is  530.871858963036
The median value of price per square foot in CA is  445.2229299363057
The standard deviation of price per square foot in CA is  428.1518333310732

Last is the scatter plot, which shows the house pricing per square foot in LA
```