```python
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
df=pd.read_csv("AB_NYC_2019.csv")
df
```

	id	name	host_id	host_name	neighbourhood_group	neighbourhood	latitude	longitude	room_type	price	minimum_nights	number_of_reviews	last_review	reviews_per_month	calculated_host_listing
0	2539	Clean & quiet apt home by the park	2787	John	Brooklyn	Kensington	40.64749	-73.97237	Private room	149	1	9	2018-10-19	0.21	
1	2595	Skylit Midtown Castle	2845	Jennifer	Manhattan	Midtown	40.75362	-73.98377	Entire home/apt	225	1	45	2019-05-21	0.38	
2	3647	THE VILLAGE OF HARLEM....NEW YORK !	4632	Elisabeth	Manhattan	Harlem	40.80902	-73.94190	Private room	150	3	0	NaN	NaN	
3	3831	Cozy Entire Floor of Brownstone	4869	LisaRoxanne	Brooklyn	Clinton Hill	40.68514	-73.95976	Entire home/apt	89	1	270	2019-07-05	4.64	
4	5022	Entire Apt: Spacious Studio/Loft by central park	7192	Laura	Manhattan	East Harlem	40.79851	-73.94399	Entire home/apt	80	10	9	2018-11-19	0.10	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
48890	36484665	Charming one bedroom - newly renovated rowhouse	8232441	Sabrina	Brooklyn	Bedford-Stuyvesant	40.67853	-73.94995	Private room	70	2	0	NaN	NaN	
48891	36485057	Affordable room in Bushwick/East Williamsburg	6570630	Marisol	Brooklyn	Bushwick	40.70184	-73.93317	Private room	40	4	0	NaN	NaN	
48892	36485431	Sunny Studio at Historical Neighborhood	23492952	Ilgar & Aysel	Manhattan	Harlem	40.81475	-73.94867	Entire home/apt	115	10	0	NaN	NaN	
48893	36485609	43rd St. Time Square-cozy single bed	30985759	Taz	Manhattan	Hell's Kitchen	40.75751	-73.99112	Shared room	55	1	0	NaN	NaN	
48894	36487245	Trendy duplex in the very heart of Hell's Kitchen	68119814	Christophe	Manhattan	Hell's Kitchen	40.76404	-73.98933	Private room	90	7	0	NaN	NaN	

48895 rows × 16 columns

```python
df.describe()
```

	id	host_id	latitude	longitude	price	minimum_nights	number_of_reviews	reviews_per_month	calculated_host_listings_count	availability_365
count	4.889500e+04	4.889500e+04	48895.000000	48895.000000	48895.000000	48895.000000	48895.000000	38843.000000	48895.000000	48895.000000
mean	1.901714e+07	6.762001e+07	40.728949	-73.952170	152.720687	7.029962	23.274466	1.373221	7.143982	112.781327
std	1.098311e+07	7.861097e+07	0.054530	0.046157	240.154170	20.510550	44.550582	1.680442	32.952519	131.622289
min	2.539000e+03	2.438000e+03	40.499790	-74.244420	0.000000	1.000000	0.000000	0.010000	1.000000	0.000000
25%	9.471945e+06	7.822033e+06	40.690100	-73.983070	69.000000	1.000000	1.000000	0.190000	1.000000	0.000000
50%	1.967728e+07	3.079382e+07	40.723070	-73.955680	106.000000	3.000000	5.000000	0.720000	1.000000	45.000000
75%	2.915218e+07	1.074344e+08	40.763115	-73.936275	175.000000	5.000000	24.000000	2.020000	2.000000	227.000000
max	3.648724e+07	2.743213e+08	40.913060	-73.712990	10000.000000	1250.000000	629.000000	58.500000	327.000000	365.000000

```python
df.price.quantile(0)
```
0.0

```python
lower=df.price.quantile(0.01)
lower
```
30.0

```python
df.price.quantile(0.25)
```
69.0

```python
df.price.quantile(0.5)
```
106.0

```python
df.price.quantile(0.75)
```
175.0

```python
df.price.quantile(0.80)
```
200.0

```python
df.price.quantile(1)
```
10000.0

```python
upper=df.price.quantile(0.99)
upper
```
799.0

```python
df1 = df[(df['price'] >=lower) & (df['price'] <= upper)]
df1
```

	id	name	host_id	host_name	neighbourhood_group	neighbourhood	latitude	longitude	room_type	price	minimum_nights	number_of_reviews	last_review	reviews_per_month	calculated_host_listing
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...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
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48894	36487245	Trendy duplex in the very heart of Hell's Kitchen	68119814	Christophe	Manhattan	Hell's Kitchen	40.76404	-73.98933	Private room	90	7	0	NaN	NaN	

48017 rows × 16 columns

```python
df1.describe()
```

	id	host_id	latitude	longitude	price	minimum_nights	number_of_reviews	reviews_per_month	calculated_host_listings_count	availability_365
count	4.801700e+04	4.801700e+04	48017.000000	48017.000000	48017.000000	48017.000000	48017.000000	38283.000000	48017.000000	48017.000000
mean	1.897651e+07	6.729578e+07	40.729006	-73.952161	138.502010	6.969844	23.471604	1.375432	7.199763	112.073224
std	1.098007e+07	7.846406e+07	0.054380	0.045990	103.694011	20.295359	44.781426	1.683071	33.213516	131.220142
min	2.539000e+03	2.438000e+03	40.499790	-74.244420	30.000000	1.000000	0.000000	0.010000	1.000000	0.000000
25%	9.437085e+06	7.755859e+06	40.690170	-73.982960	70.000000	1.000000	1.000000	0.190000	1.000000	0.000000
50%	1.962104e+07	3.053256e+07	40.722990	-73.955650	105.000000	3.000000	5.000000	0.720000	1.000000	44.000000
75%	2.909618e+07	1.074178e+08	40.763160	-73.936460	175.000000	5.000000	24.000000	2.025000	2.000000	224.000000
max	3.648724e+07	2.743213e+08	40.913060	-73.712990	799.000000	1250.000000	629.000000	58.500000	327.000000	365.000000

```python
df1.price.quantile(0)
```
30.0

```python
df1.price.quantile(0.25)
```
70.0

```python
df1.price.quantile(0.5)
```
105.0

```python
df1.price.quantile(0.75)
```
175.0

```python
df1.price.quantile(1)
```
799.0