```
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```

In [ ]:

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

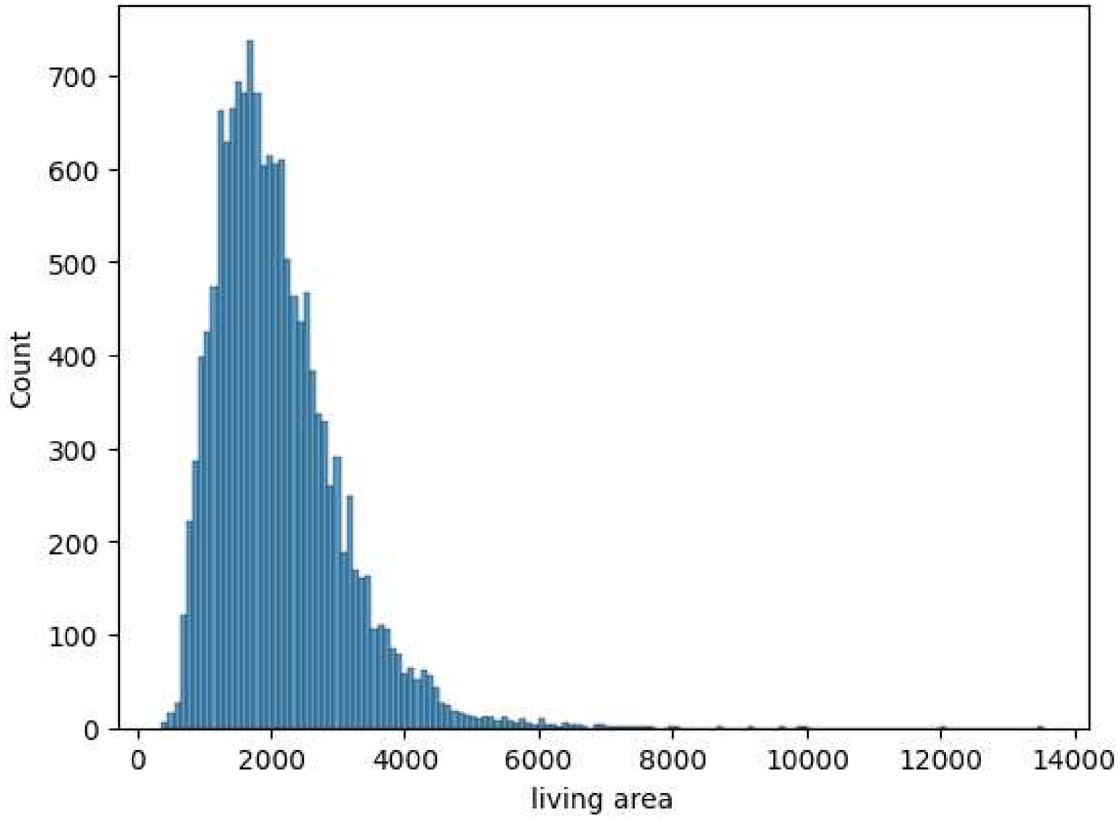
In [14]:

```
data = pd.read_csv('/content/House Price India.csv')
print(data.head())
```

```
           id   Date  number of bedrooms  number of bathrooms  living area  \
0  6762810145  42491                   5                 2.50         3650   
1  6762810635  42491                   4                 2.50         2920   
2  6762810998  42491                   5                 2.75         2910   
3  6762812605  42491                   4                 2.50         3310   
4  6762812919  42491                   3                 2.00         2710   

   lot area  number of floors  waterfront present  number of views  \
0      9050               2.0                   0                4   
1      4000               1.5                   0                0   
2      9480               1.5                   0                0   
3     42998               2.0                   0                0   
4      4500               1.5                   0                0   

   condition of the house  ...  Built Year  Renovation Year  Postal Code  \
0                       5  ...        1921                0       122003   
1                       5  ...        1909                0       122004   
2                       3  ...        1939                0       122004   
3                       3  ...        2001                0       122005   
4                       4  ...        1929                0       122006   

   Lattitude  Longitude  living_area_renov  lot_area_renov  \
0    52.8645   -114.557               2880            5400   
1    52.8878   -114.470               2470            4000   
2    52.8852   -114.468               2940            6600   
3    52.9532   -114.321               3350           42847   
4    52.9047   -114.485               2060            4500   

   Number of schools nearby  Distance from the airport    Price  
0                         2                         58  2380000  
1                         2                         51  1400000  
2                         1                         53  1200000  
3                         3                         76   838000  
4                         1                         51   805000  

[5 rows x 23 columns]
```

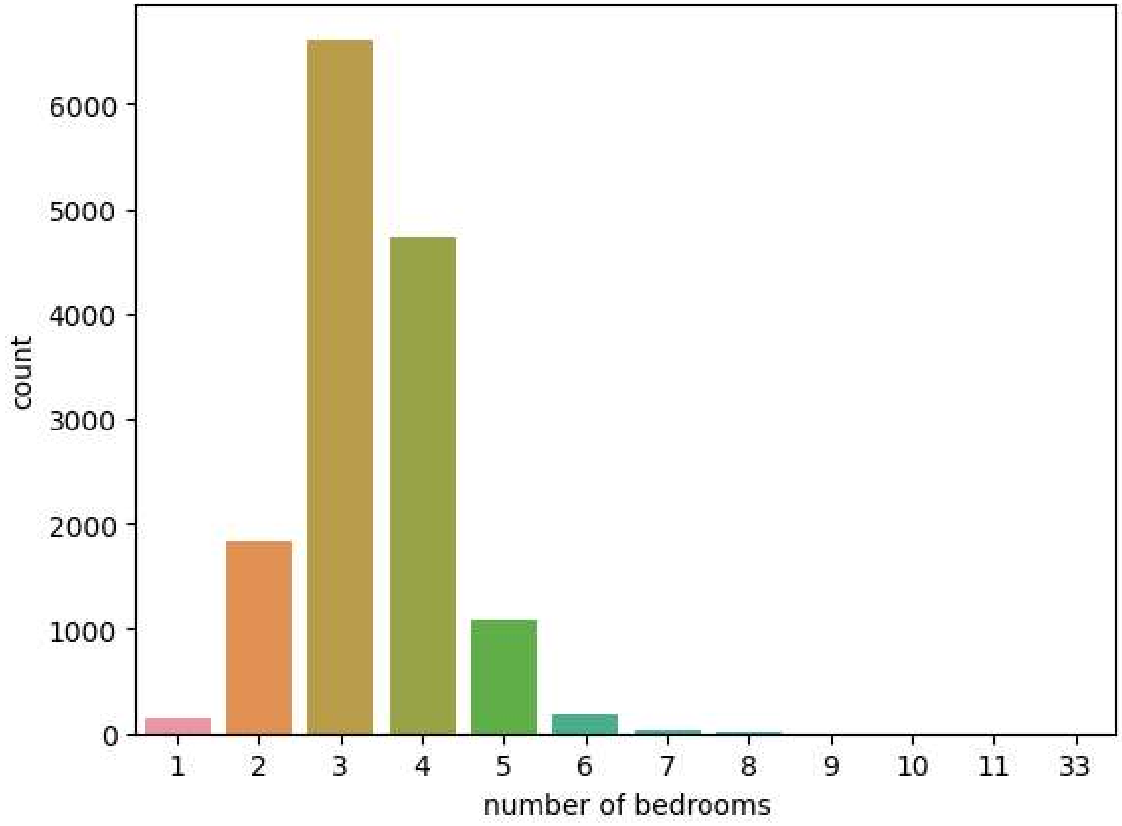
In [15]:

```
# Histogram
sns.histplot(data['living area'])
plt.show()
```



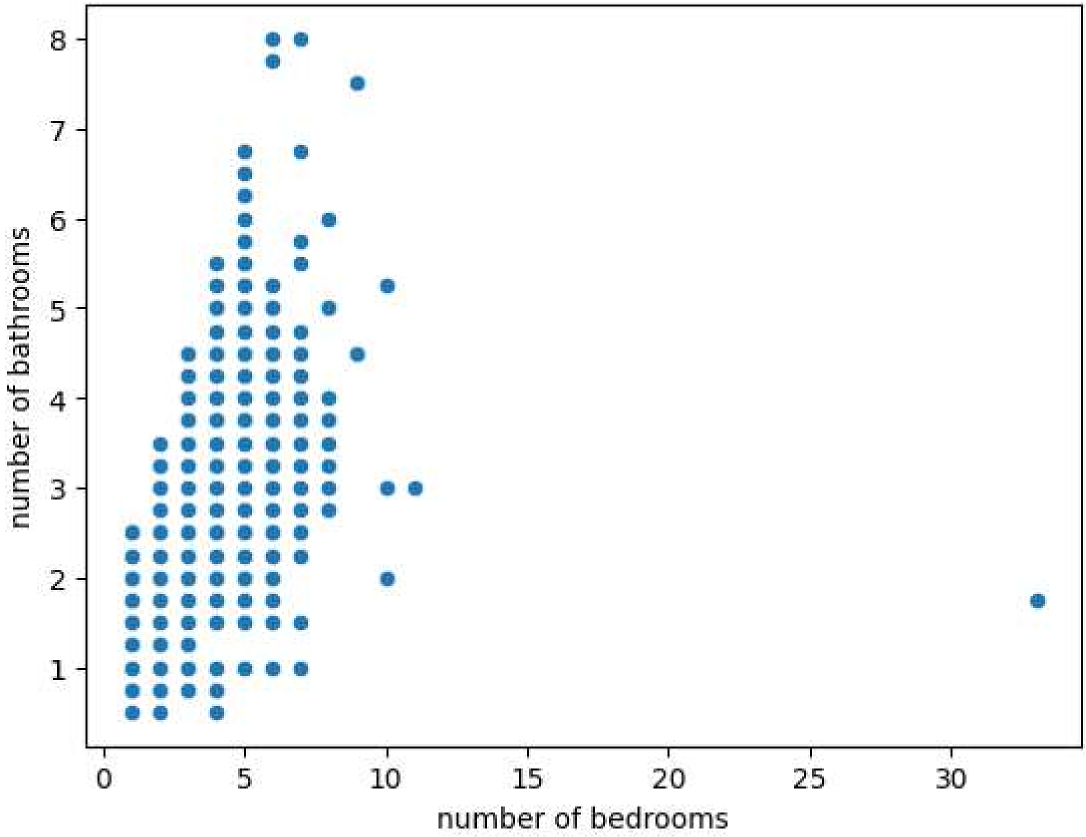
In [16]:

```
# Bar chart
sns.countplot(x='number of bedrooms', data=data)
plt.show()
```



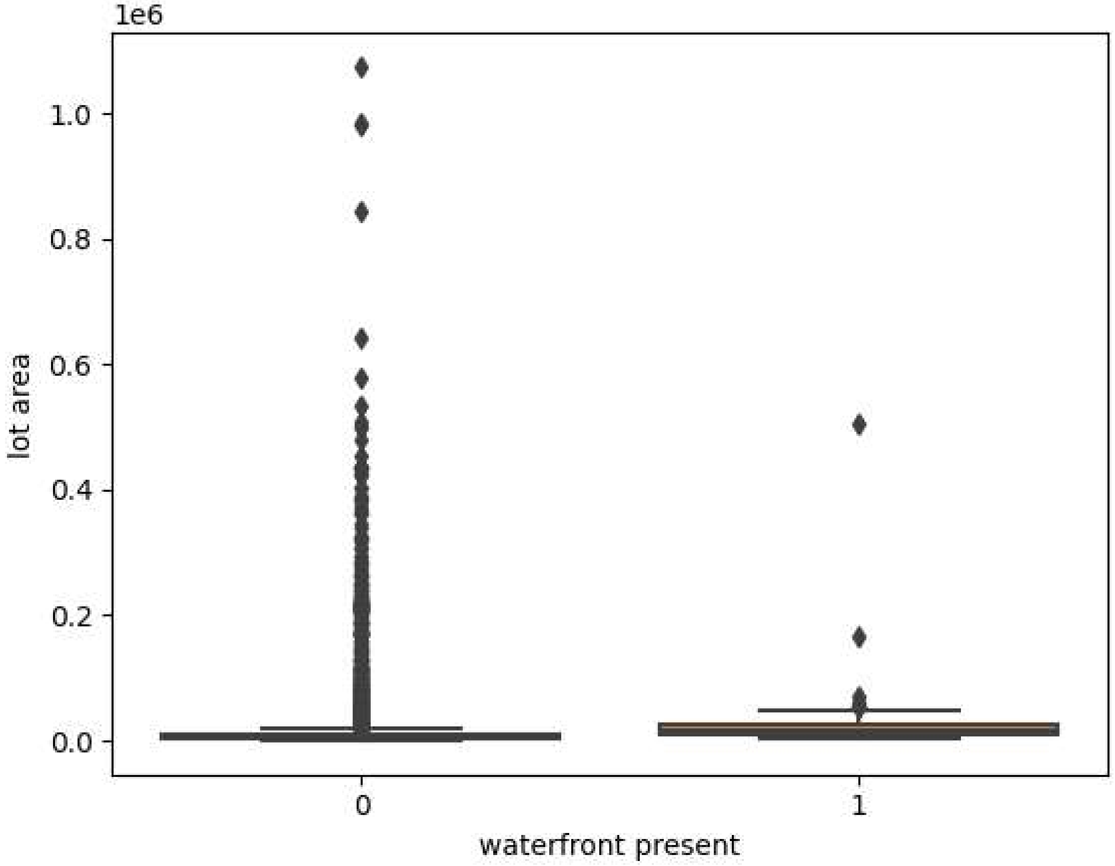
In [18]:

```
# Scatter plot
sns.scatterplot(x='number of bedrooms', y='number of bathrooms', data=data)
plt.show()
```



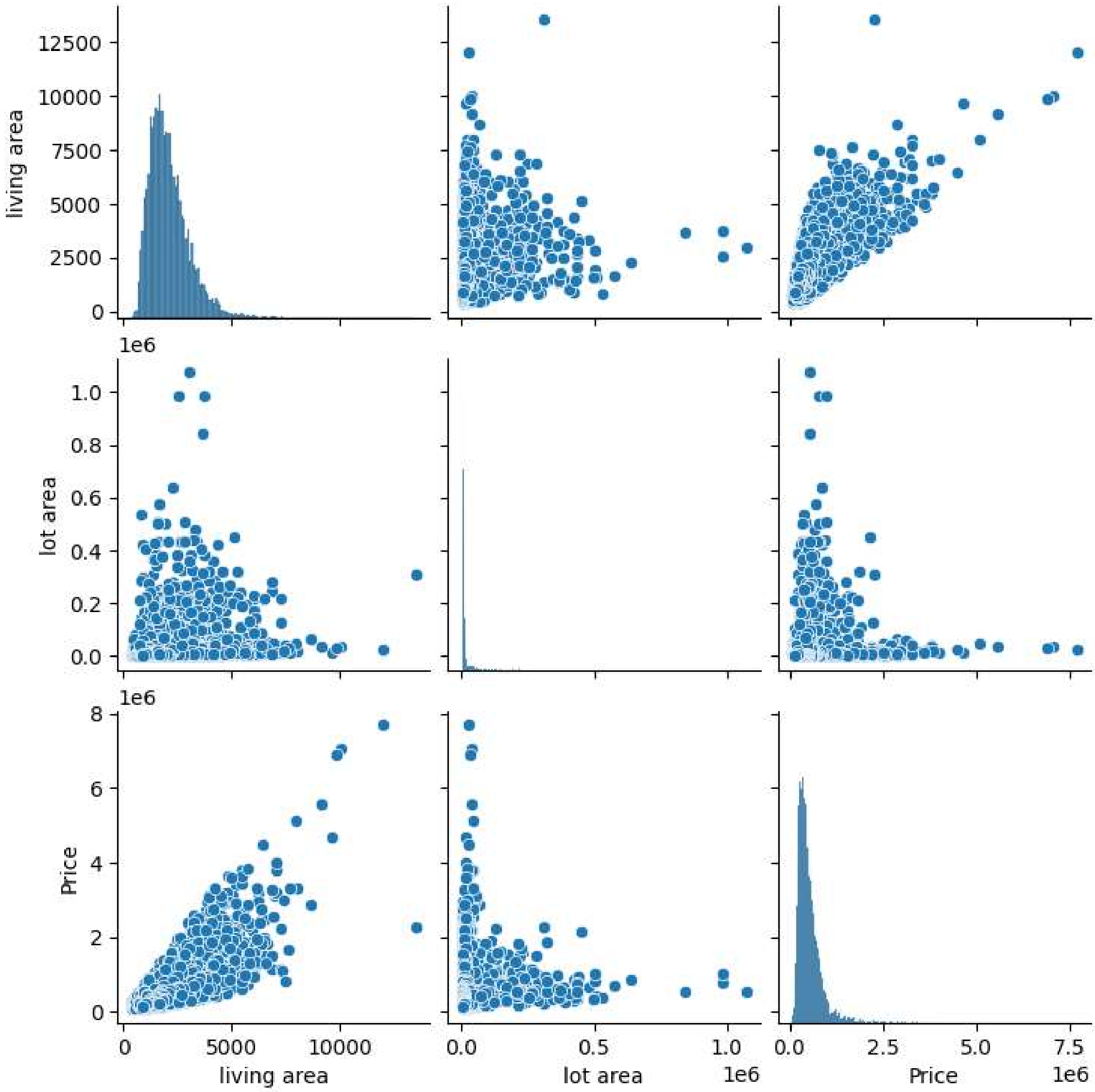
In [20]:

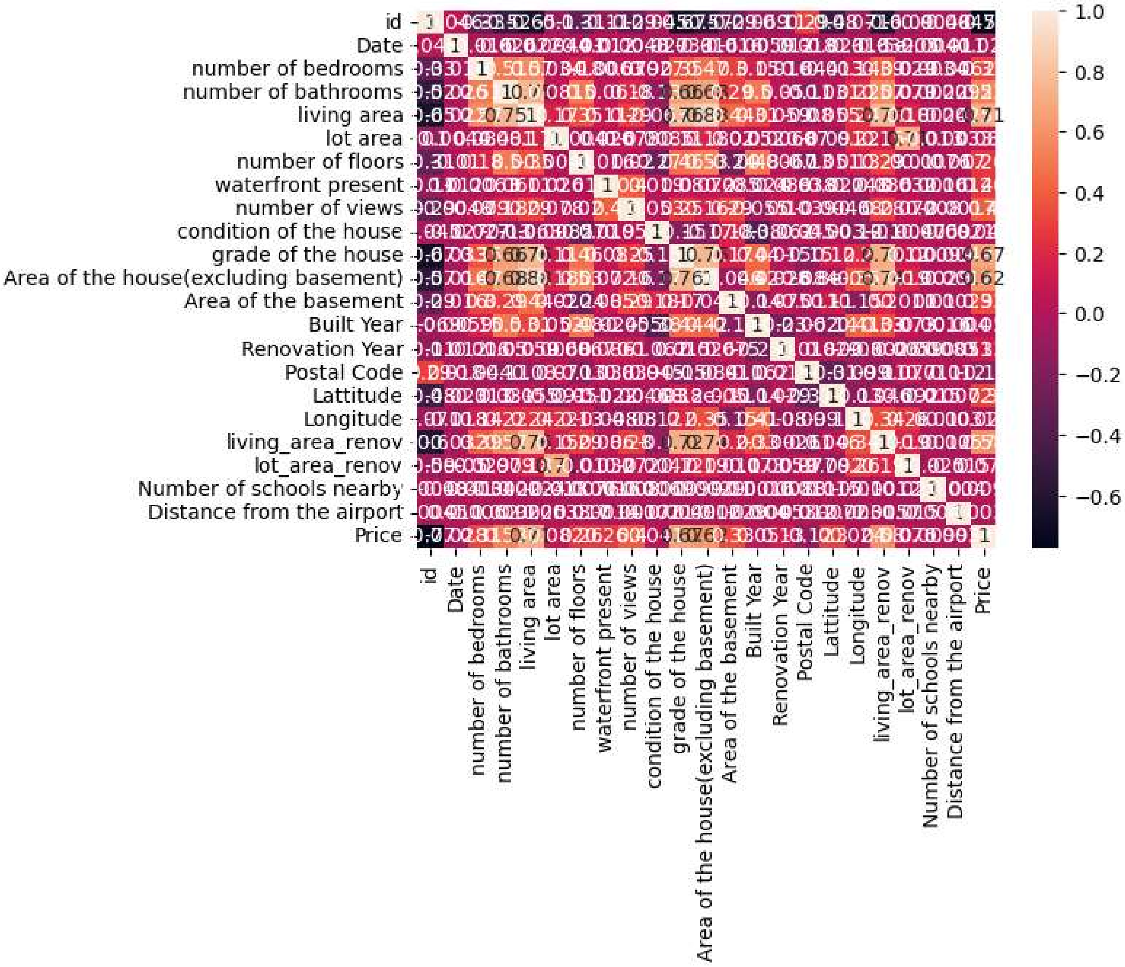
```
# Box plot or Violin plot
sns.boxplot(x='waterfront present', y='lot area', data=data)
plt.show()
```



In [23]:

```
# Pairplot for multiple numerical columns
sns.pairplot(data[['living area', 'lot area', 'Price']])
plt.show()

# Correlation heatmap
corr_matrix = data.corr()
sns.heatmap(corr_matrix, annot=True)
plt.show()
```




id
Date
number of bedrooms
number of bathrooms
living area
lot area
number of floors
waterfront present
number of views
condition of the house
grade of the house
Area of the house(excluding basement)
Area of the basement
Built Year
Renovation Year
Postal Code
Lattitude
Longitude
living_area_renov
lot_area_renov
Number of schools nearby
Distance from the airport
Price
1.0
0.8
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6

In [24]:

```
# This will give you count, mean, std deviation, min, 25%, 50%, 75% and max values for n
desc_stats = data.describe()
print(desc_stats)

# For categorical columns
cat_desc = data['condition of the house'].value_counts()
print(cat_desc)
```

```
                 id          Date  number of bedrooms  number of bathrooms  \
count  1.462000e+04  14620.000000        14620.000000         14620.000000
mean   6.762821e+09  42604.538646            3.379343             2.129583
std    6.237575e+03     67.347991            0.938719             0.769934
min    6.762810e+09  42491.000000            1.000000             0.500000
25%    6.762815e+09  42546.000000            3.000000             1.750000
50%    6.762821e+09  42600.000000            3.000000             2.250000
75%    6.762826e+09  42662.000000            4.000000             2.500000
max    6.762832e+09  42734.000000           33.000000             8.000000

        living area      lot area  number of floors  waterfront present  \
count  14620.000000  1.462000e+04      14620.000000        14620.000000
mean    2098.262996  1.509328e+04          1.502360            0.007661
std      928.275721  3.791962e+04          0.540239            0.087193
min      370.000000  5.200000e+02          1.000000            0.000000
25%     1440.000000  5.010750e+03          1.000000            0.000000
50%     1930.000000  7.620000e+03          1.500000            0.000000
75%     2570.000000  1.080000e+04          2.000000            0.000000
max    13540.000000  1.074218e+06          3.500000            1.000000

       number of views  condition of the house  ...    Built Year  \
count     14620.000000            14620.000000  ...  14620.000000
mean          0.233105                3.430506  ...   1970.926402
std           0.766259                0.664151  ...     29.493625
min           0.000000                1.000000  ...   1900.000000
25%           0.000000                3.000000  ...   1951.000000
50%           0.000000                3.000000  ...   1975.000000
75%           0.000000                4.000000  ...   1997.000000
max           4.000000                5.000000  ...   2015.000000

       Renovation Year    Postal Code     Lattitude     Longitude  \
count     14620.000000   14620.000000  14620.000000  14620.000000
mean         90.924008  122033.062244     52.792848   -114.404007
std         416.216661      19.082418      0.137522      0.141326
min           0.000000  122003.000000     52.385900   -114.709000
25%           0.000000  122017.000000     52.707600   -114.519000
50%           0.000000  122032.000000     52.806400   -114.421000
75%           0.000000  122048.000000     52.908900   -114.315000
max        2015.000000  122072.000000     53.007600   -113.505000

       living_area_renov  lot_area_renov  Number of schools nearby  \
count       14620.000000    14620.000000              14620.000000
mean         1996.702257    12753.500068                  2.012244
std           691.093366    26058.414467                  0.817284
min           460.000000      651.000000                  1.000000
25%          1490.000000     5097.750000                  1.000000
50%          1850.000000     7620.000000                  2.000000
75%          2380.000000    10125.000000                  3.000000
max          6110.000000   560617.000000                  3.000000

       Distance from the airport         Price
count               14620.000000  1.462000e+04
mean                   64.950958  5.389322e+05
std                     8.936008  3.675324e+05
min                    50.000000  7.800000e+04
25%                    57.000000  3.200000e+05
50%                    65.000000  4.500000e+05
75%                    73.000000  6.450000e+05
max                    80.000000  7.700000e+06
```

```
[8 rows x 23 columns]
3    9350
4    3874
5    1278
2     100
1      18
Name: condition of the house, dtype: int64
```

In [25]:

```
missing_values = data.isnull().sum()
print(missing_values)
```

```
id                                       0
Date                                     0
number of bedrooms                       0
number of bathrooms                      0
living area                              0
lot area                                 0
number of floors                         0
waterfront present                       0
number of views                          0
condition of the house                   0
grade of the house                       0
Area of the house(excluding basement)    0
Area of the basement                     0
Built Year                               0
Renovation Year                          0
Postal Code                              0
Lattitude                                0
Longitude                                0
living_area_renov                        0
lot_area_renov                           0
Number of schools nearby                 0
Distance from the airport                0
Price                                    0
dtype: int64
```

In [26]:

```
data_cleaned = data.dropna()
```

In [31]:

```
mean_value = data['Price'].mean()
data['Price'].fillna(mean_value, inplace=True)
```

In [32]:

```
mode_value = data['Postal Code'].mode()[0]
data['Postal Code'].fillna(mode_value, inplace=True)
```