In [1]:
```python
import pandas as pd
df = pd.read_csv('House Price India.csv')
print(df.head())
print(df.describe())
print(df['Price'].describe())
print(df.mean())
print(df.median())
print(df.mode())
print(df.var())
print(df.std())
print(df.corr())
import matplotlib.pyplot as plt

plt.hist(df['Price'])
plt.show()
```

```
           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]
                 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]
count    1.462000e+04
mean     5.389322e+05
std      3.675324e+05
min      7.800000e+04
25%      3.200000e+05
50%      4.500000e+05
75%      6.450000e+05
max      7.700000e+06
Name: Price, dtype: float64
id                                        6.762821e+09
Date                                      4.260454e+04
number of bedrooms                        3.379343e+00
number of bathrooms                       2.129583e+00
living area                               2.098263e+03
lot area                                  1.509328e+04
number of floors                          1.502360e+00
waterfront present                        7.660739e-03
number of views                           2.331053e-01
condition of the house                    3.430506e+00
grade of the house                        7.682421e+00
Area of the house(excluding basement)     1.801784e+03
Area of the basement                      2.964791e+02
Built Year                                1.970926e+03
Renovation Year                           9.092401e+01
Postal Code                               1.220331e+05
Lattitude                                 5.279285e+01
Longitude                                -1.144040e+02
living_area_renov                         1.996702e+03
lot_area_renov                            1.275350e+04
Number of schools nearby                  2.012244e+00
Distance from the airport                 6.495096e+01
```

```
Price                                          5.389322e+05
dtype: float64
id                                             6.762821e+09
Date                                           4.260000e+04
number of bedrooms                             3.000000e+00
number of bathrooms                            2.250000e+00
living area                                    1.930000e+03
lot area                                       7.620000e+03
number of floors                               1.500000e+00
waterfront present                             0.000000e+00
number of views                                0.000000e+00
condition of the house                         3.000000e+00
grade of the house                             7.000000e+00
Area of the house(excluding basement)          1.580000e+03
Area of the basement                           0.000000e+00
Built Year                                     1.975000e+03
Renovation Year                                0.000000e+00
Postal Code                                    1.220320e+05
Lattitude                                      5.280640e+01
Longitude                                     -1.144210e+02
living_area_renov                              1.850000e+03
lot_area_renov                                 7.620000e+03
Number of schools nearby                       2.000000e+00
Distance from the airport                      6.500000e+01
Price                                          4.500000e+05
dtype: float64
               id       Date   number of bedrooms   number of bathrooms  \
0        6762810020   42543.0                  3.0                   2.5
1        6762810021      NaN                  NaN                   NaN
2        6762810022      NaN                  NaN                   NaN
3        6762810023      NaN                  NaN                   NaN
4        6762810026      NaN                  NaN                   NaN
...            ...       ...                  ...                   ...
14615    6762831611      NaN                  NaN                   NaN
14616    6762831612      NaN                  NaN                   NaN
14617    6762831613      NaN                  NaN                   NaN
14618    6762831615      NaN                  NaN                   NaN
14619    6762831616      NaN                  NaN                   NaN


        living area   lot area   number of floors   waterfront present  \
0           1400.0     5000.0                1.0                  0.0
1              NaN        NaN                NaN                  NaN
2              NaN        NaN                NaN                  NaN
3              NaN        NaN                NaN                  NaN
4              NaN        NaN                NaN                  NaN
...            ...        ...                ...                  ...
14615          NaN        NaN                NaN                  NaN
14616          NaN        NaN                NaN                  NaN
14617          NaN        NaN                NaN                  NaN
14618          NaN        NaN                NaN                  NaN
14619          NaN        NaN                NaN                  NaN


        number of views   condition of the house  ...  Built Year  \
0                   0.0                      3.0  ...      2014.0
1                   NaN                      NaN  ...         NaN
2                   NaN                      NaN  ...         NaN
3                   NaN                      NaN  ...         NaN
4                   NaN                      NaN  ...         NaN
...                 ...                      ...  ...         ...
14615               NaN                      NaN  ...         NaN
14616               NaN                      NaN  ...         NaN
14617               NaN                      NaN  ...         NaN
14618               NaN                      NaN  ...         NaN
14619               NaN                      NaN  ...         NaN
```

	Renovation Year	Postal Code	Lattitude	Longitude	living_area_renov \
0	0.0	122028.0	52.7745	-114.562	1440.0
1	NaN	NaN	52.8834	-114.552	NaN
2	NaN	NaN	52.8947	NaN	NaN
3	NaN	NaN	52.9146	NaN	NaN
4	NaN	NaN	52.9255	NaN	NaN
...	...	...	...	...	...
14615	NaN	NaN	NaN	NaN	NaN
14616	NaN	NaN	NaN	NaN	NaN
14617	NaN	NaN	NaN	NaN	NaN
14618	NaN	NaN	NaN	NaN	NaN
14619	NaN	NaN	NaN	NaN	NaN

	lot_area_renov	Number of schools nearby	Distance from the airport \
0	5000.0	3.0	54.0
1	NaN	NaN	NaN
2	NaN	NaN	NaN
3	NaN	NaN	NaN
4	NaN	NaN	NaN
...	...	...	...
14615	NaN	NaN	NaN
14616	NaN	NaN	NaN
14617	NaN	NaN	NaN
14618	NaN	NaN	NaN
14619	NaN	NaN	NaN

	Price
0	450000.0
1	NaN
2	NaN
3	NaN
4	NaN
...	...
14615	NaN
14616	NaN
14617	NaN
14618	NaN
14619	NaN

```
[14620 rows x 23 columns]
id                                      3.890734e+07
Date                                    4.535752e+03
number of bedrooms                      8.811931e-01
number of bathrooms                     5.927991e-01
living area                             8.616958e+05
lot area                                1.437898e+09
number of floors                        2.918578e-01
waterfront present                      7.602572e-03
number of views                         5.871521e-01
condition of the house                  4.410968e-01
grade of the house                      1.380702e+00
Area of the house(excluding basement)   6.952391e+05
Area of the basement                    2.011984e+05
Built Year                              8.698739e+02
Renovation Year                         1.732363e+05
Postal Code                             3.641387e+02
Lattitude                               1.891231e-02
Longitude                               1.997301e-02
living_area_renov                       4.776100e+05
lot_area_renov                          6.790410e+08
Number of schools nearby                6.679532e-01
Distance from the airport               7.985224e+01
Price                                   1.350801e+11
```

```
dtype: float64
id                                       6237.574799
Date                                       67.347991
number of bedrooms                          0.938719
number of bathrooms                         0.769934
living area                               928.275721
lot area                                37919.621304
number of floors                            0.540239
waterfront present                          0.087193
number of views                             0.766259
condition of the house                      0.664151
grade of the house                          1.175033
Area of the house(excluding basement)     833.809963
Area of the basement                      448.551409
Built Year                                 29.493625
Renovation Year                           416.216661
Postal Code                                19.082418
Lattitude                                   0.137522
Longitude                                   0.141326
living_area_renov                         691.093366
lot_area_renov                          26058.414467
Number of schools nearby                    0.817284
Distance from the airport                   8.936008
Price                                  367532.380804
dtype: float64
```

	id	Date	number of bedrooms \
id	1.000000	0.045966	-0.329034
Date	0.045966	1.000000	-0.015663
number of bedrooms	-0.329034	-0.015663	1.000000
number of bathrooms	-0.516909	-0.026485	0.509784
living area	-0.648127	-0.021958	0.570526
lot area	-0.100269	0.004392	0.034416
number of floors	-0.312305	-0.010335	0.177294
waterfront present	-0.112937	0.012006	-0.006257
number of views	-0.293004	-0.004782	0.078665
condition of the house	-0.045061	-0.027402	0.026597
grade of the house	-0.673448	-0.033097	0.352945
Area of the house(excluding basement)	-0.565116	-0.015994	0.473599
Area of the basement	-0.290806	-0.015711	0.300332
Built Year	-0.068645	-0.005869	0.152954
Renovation Year	-0.109155	-0.011636	0.016132
Postal Code	0.294709	0.018243	-0.044156
Lattitude	-0.479334	-0.023327	-0.013163
Longitude	-0.070841	-0.018231	0.135712
living_area_renov	-0.599900	-0.032495	0.389855
lot_area_renov	-0.089604	-0.000050	0.029400
Number of schools nearby	-0.004821	-0.004071	0.003397
Distance from the airport	-0.004542	0.011457	-0.006157
Price	-0.773114	-0.027919	0.308460

	number of bathrooms	living area \
id	-0.516909	-0.648127
Date	-0.026485	-0.021958
number of bedrooms	0.509784	0.570526
number of bathrooms	1.000000	0.753517
living area	0.753517	1.000000
lot area	0.080806	0.174420
number of floors	0.502924	0.354743
waterfront present	0.060104	0.105837
number of views	0.183789	0.287728
condition of the house	-0.128232	-0.063358
grade of the house	0.663054	0.761835
Area of the house(excluding basement)	0.684391	0.875793
Area of the basement	0.287190	0.441491

```
        Built Year                              0.498127      0.309602
        Renovation Year                         0.049669      0.059400
        Postal Code                            -0.105546     -0.080303
        Lattitude                               0.031156      0.054518
        Longitude                               0.223904      0.240208
        living_area_renov                       0.570530      0.757571
        lot_area_renov                          0.078627      0.180312
        Number of schools nearby                0.002180      0.002370
        Distance from the airport               0.009206      0.002511
        Price                                   0.531735      0.712169


                                          lot area   number of floors  \
        id                               -0.100269         -0.312305
        Date                              0.004392         -0.010335
        number of bedrooms                0.034416          0.177294
        number of bathrooms               0.080806          0.502924
        living area                       0.174420          0.354743
        lot area                          1.000000         -0.004138
        number of floors                 -0.004138          1.000000
        waterfront present                0.026282          0.016316
        number of views                   0.078308          0.020153
        condition of the house           -0.008548         -0.269928
        grade of the house                0.110546          0.463082
        Area of the house(excluding basement)  0.183553    0.525643
        Area of the basement              0.019755         -0.242976
        Built Year                        0.051615          0.481565
        Renovation Year                   0.006848          0.006705
        Postal Code                       0.070131         -0.129788
        Lattitude                        -0.090983          0.050731
        Longitude                         0.221432          0.127550
        living_area_renov                 0.149744          0.285093
        lot_area_renov                    0.706812         -0.010120
        Number of schools nearby         -0.012671         -0.007579
        Distance from the airport         0.003291          0.016567
        Price                             0.081992          0.262732


                                          waterfront present   number of views  \
        id                                      -0.112937         -0.293004
        Date                                     0.012006         -0.004782
        number of bedrooms                      -0.006257          0.078665
        number of bathrooms                      0.060104          0.183789
        living area                              0.105837          0.287728
        lot area                                 0.026282          0.078308
        number of floors                         0.016316          0.020153
        waterfront present                       1.000000          0.400206
        number of views                          0.400206          1.000000
        condition of the house                   0.018644          0.052533
        grade of the house                       0.079831          0.254532
        Area of the house(excluding basement)    0.071865          0.162672
        Area of the basement                     0.085441          0.293062
        Built Year                              -0.024226         -0.055357
        Renovation Year                          0.085865          0.102944
        Postal Code                              0.038318          0.039268
        Lattitude                               -0.021795         -0.004555
        Longitude                               -0.047791         -0.079706
        living_area_renov                        0.085743          0.281452
        lot_area_renov                           0.032055          0.072300
        Number of schools nearby                 0.001563          0.008004
        Distance from the airport                0.001448         -0.001657
        Price                                    0.263687          0.395973


                                          condition of the house  ...  \
        id                                      -0.045061  ...
        Date                                    -0.027402  ...
```
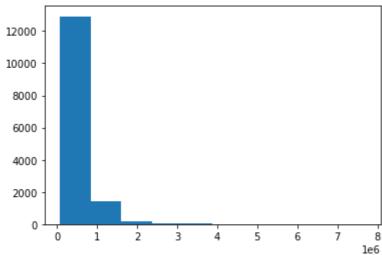
```
        number of bedrooms                          0.026597  ...
        number of bathrooms                        -0.128232  ...
        living area                                -0.063358  ...
        lot area                                   -0.008548  ...
        number of floors                           -0.269928  ...
        waterfront present                          0.018644  ...
        number of views                             0.052533  ...
        condition of the house                      1.000000  ...
        grade of the house                         -0.152530  ...
        Area of the house(excluding basement)      -0.167695  ...
        Area of the basement                        0.180609  ...
        Built Year                                 -0.381718  ...
        Renovation Year                            -0.062126  ...
        Postal Code                                 0.045334  ...
        Lattitude                                  -0.002998  ...
        Longitude                                  -0.121189  ...
        living_area_renov                          -0.099743  ...
        lot_area_renov                             -0.004748  ...
        Number of schools nearby                   -0.006939  ...
        Distance from the airport                  -0.002136  ...
        Price                                       0.041376  ...

                                               Built Year  Renovation Year  \
        id                                      -0.068645        -0.109155
        Date                                    -0.005869        -0.011636
        number of bedrooms                       0.152954         0.016132
        number of bathrooms                      0.498127         0.049669
        living area                              0.309602         0.059400
        lot area                                 0.051615         0.006848
        number of floors                         0.481565         0.006705
        waterfront present                      -0.024226         0.085865
        number of views                         -0.055357         0.102944
        condition of the house                  -0.381718        -0.062126
        grade of the house                       0.440358         0.014501
        Area of the house(excluding basement)    0.419369         0.025727
        Area of the basement                    -0.138843         0.075104
        Built Year                               1.000000        -0.233683
        Renovation Year                         -0.233683         1.000000
        Postal Code                             -0.062349         0.018006
        Lattitude                               -0.143153         0.028908
        Longitude                                0.414591        -0.080050
        living_area_renov                        0.328625        -0.002601
        lot_area_renov                           0.072874         0.005869
        Number of schools nearby                -0.001631        -0.000826
        Distance from the airport               -0.003968         0.005342
        Price                                    0.050307         0.133173

                                               Postal Code  Lattitude  Longitude  \
        id                                        0.294709  -0.479334  -0.070841
        Date                                      0.018243  -0.023327  -0.018231
        number of bedrooms                       -0.044156  -0.013163   0.135712
        number of bathrooms                      -0.105546   0.031156   0.223904
        living area                              -0.080303   0.054518   0.240208
        lot area                                  0.070131  -0.090983   0.221432
        number of floors                         -0.129788   0.050731   0.127550
        waterfront present                        0.038318  -0.021795  -0.047791
        number of views                           0.039268  -0.004555  -0.079706
        condition of the house                    0.045334  -0.002998  -0.121189
        grade of the house                       -0.146342   0.115256   0.203754
        Area of the house(excluding basement)    -0.083730  -0.000088   0.345899
        Area of the basement                     -0.010542   0.112989  -0.145879
        Built Year                               -0.062349  -0.143153   0.414591
        Renovation Year                           0.018006   0.028908  -0.080050
        Postal Code                               1.000000  -0.310172  -0.099003
```

```
            Lattitude                        -0.310172    1.000000   -0.131472
            Longitude                        -0.099003   -0.131472    1.000000
            living_area_renov                -0.108454    0.046148    0.341221
            lot_area_renov                    0.077483   -0.091622    0.258066
            Number of schools nearby          0.010605    0.014949   -0.010163
            Distance from the airport         0.011528    0.007193   -0.003100
            Price                            -0.115908    0.297490    0.024414

                                          living_area_renov   lot_area_renov  \
            id                                    -0.599900        -0.089604
            Date                                  -0.032495        -0.000050
            number of bedrooms                     0.389855         0.029400
            number of bathrooms                    0.570530         0.078627
            living area                            0.757571         0.180312
            lot area                               0.149744         0.706812
            number of floors                       0.285093        -0.010120
            waterfront present                     0.085743         0.032055
            number of views                        0.281452         0.072300
            condition of the house                -0.099743        -0.004748
            grade of the house                     0.720019         0.116725
            Area of the house(excluding basement)  0.737744         0.194670
            Area of the basement                   0.196403         0.011283
            Built Year                             0.328625         0.072874
            Renovation Year                       -0.002601         0.005869
            Postal Code                           -0.108454         0.077483
            Lattitude                              0.046148        -0.091622
            Longitude                              0.341221         0.258066
            living_area_renov                      1.000000         0.189225
            lot_area_renov                         0.189225         1.000000
            Number of schools nearby              -0.001203        -0.025014
            Distance from the airport             -0.005673        -0.014587
            Price                                  0.584924         0.075535

                                          Number of schools nearby  \
            id                                            -0.004821
            Date                                          -0.004071
            number of bedrooms                             0.003397
            number of bathrooms                            0.002180
            living area                                    0.002370
            lot area                                      -0.012671
            number of floors                              -0.007579
            waterfront present                             0.001563
            number of views                                0.008004
            condition of the house                        -0.006939
            grade of the house                             0.000986
            Area of the house(excluding basement)         -0.002894
            Area of the basement                           0.010284
            Built Year                                    -0.001631
            Renovation Year                               -0.000826
            Postal Code                                    0.010605
            Lattitude                                      0.014949
            Longitude                                     -0.010163
            living_area_renov                             -0.001203
            lot_area_renov                                -0.025014
            Number of schools nearby                       1.000000
            Distance from the airport                      0.004035
            Price                                          0.009890

                                          Distance from the airport      Price
            id                                            -0.004542  -0.773114
            Date                                           0.011457  -0.027919
            number of bedrooms                            -0.006157   0.308460
            number of bathrooms                            0.009206   0.531735
            living area                                    0.002511   0.712169
```

```
                lot area                                          0.003291   0.081992
                number of floors                                 0.016567   0.262732
                waterfront present                               0.001448   0.263687
                number of views                                 -0.001657   0.395973
                condition of the house                          -0.002136   0.041376
                grade of the house                               0.004940   0.671814
                Area of the house(excluding basement)            0.001222   0.615220
                Area of the basement                             0.002926   0.330202
                Built Year                                      -0.003968   0.050307
                Renovation Year                                  0.005342   0.133173
                Postal Code                                      0.011528  -0.115908
                Lattitude                                        0.007193   0.297490
                Longitude                                       -0.003100   0.024414
                living_area_renov                               -0.005673   0.584924
                lot_area_renov                                  -0.014587   0.075535
                Number of schools nearby                         0.004035   0.009890
                Distance from the airport                        1.000000   0.003804
                Price                                            0.003804   1.000000

                [23 rows x 23 columns]
```



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In [ ]:
```

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In [ ]:
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