21BAI1131-SHUVAM JENA

```
import pandas as
pdimport numpy as
np
import matplotlib.pyplot as
pltimport seaborn as sns
```

TASK1------Downloading the dataset

TASK2-----Load the dataset

	id	Date	number_of_bedrooms	number_of_bathrooms	\	
0	6762810145	42491	5	2.50		
1	6762810635	42491	4	2.50		
2	6762810998	42491	5	2.75		
3	6762812605	42491	4	2.50		
4	6762812919	42491	3	2.00		
...	...	...	...	...		
14615	6762830250	42734	2	1.50		
14616	6762830339	42734	3	2.00		
14617	6762830618	42734	2	1.00		
14618	6762830709	42734	4	1.00		
14619	6762831463	42734	3	1.00		

	living_area	lot_area	number_of_floors	waterfront_present	\
0	3650	9050	2.0	0	
1	2920	4000	1.5	0	
2	2910	9480	1.5	0	
3	3310	42998	2.0	0	
4	2710	4500	1.5	0	
...	...	...	...	...	
14615	1556	20000	1.0	0	
14616	1680	7000	1.5	0	
14617	1070	6120	1.0	0	
14618	1030	6621	1.0	0	
14619	900	4770	1.0	0	

	number_of_views	condition_of_the_house	...	Built_Year	\	
0	4	5	...	1921		
1	0	5	...	1909		
2	0	3	...	1939		
3	0	3	...	2001		

4	0	4	...	1929		
...	...	...	...	...		

14615 0 4 ... 1957
14616 0 4 ... 1968
14617 0 3 ... 1962
14618 0 4 ... 1955
14619 0 3 ... 1969

52.8852 -114.468
122004
0
52.8645 -114.557
122003
0
0
Renovation_Year Postal_Code Lattitude Longitude
living_area_renov \
0
122004
52.8878 -114.470

0
122005
52.9532 -114.321

...
...
...
...

...
52.7289 -114.507
122056
0
52.9047 -114.485
122006
0
14615
0
122066
52.6191 -114.472

0
122072
52.5075 -114.393

```
0
122042
52.7157   -114.411


                  2009
                            122018
                    52.5338    -114.552
```

900

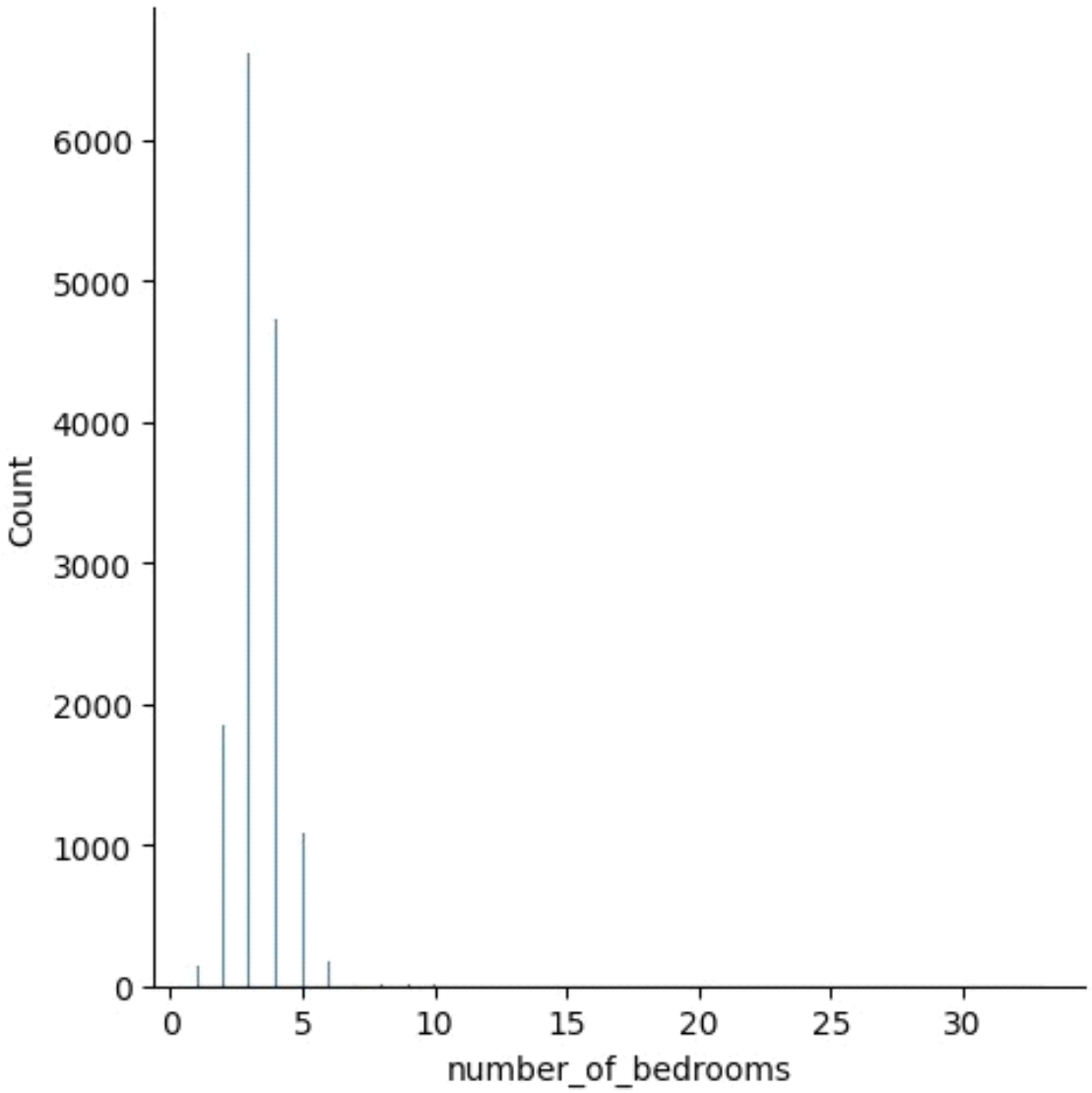
```
       lot_area_renov  Number_of_schools_nearby

Distance_from_the_airport  \0  5400
58
1                4000
51
2                6600
53
3               42847
76
4                4500
51
...               ...
...
14615           17286
76
14616            7480
59


                                                  2

                                                  2

                                                  1

                                                  3

                                                  1

                                                ...

                                                  3

                                                  3
```

TASK3----- Perfroming the visualization

Univariate Analysis

```
sns.displot(df['number_of_bedrooms'])
```

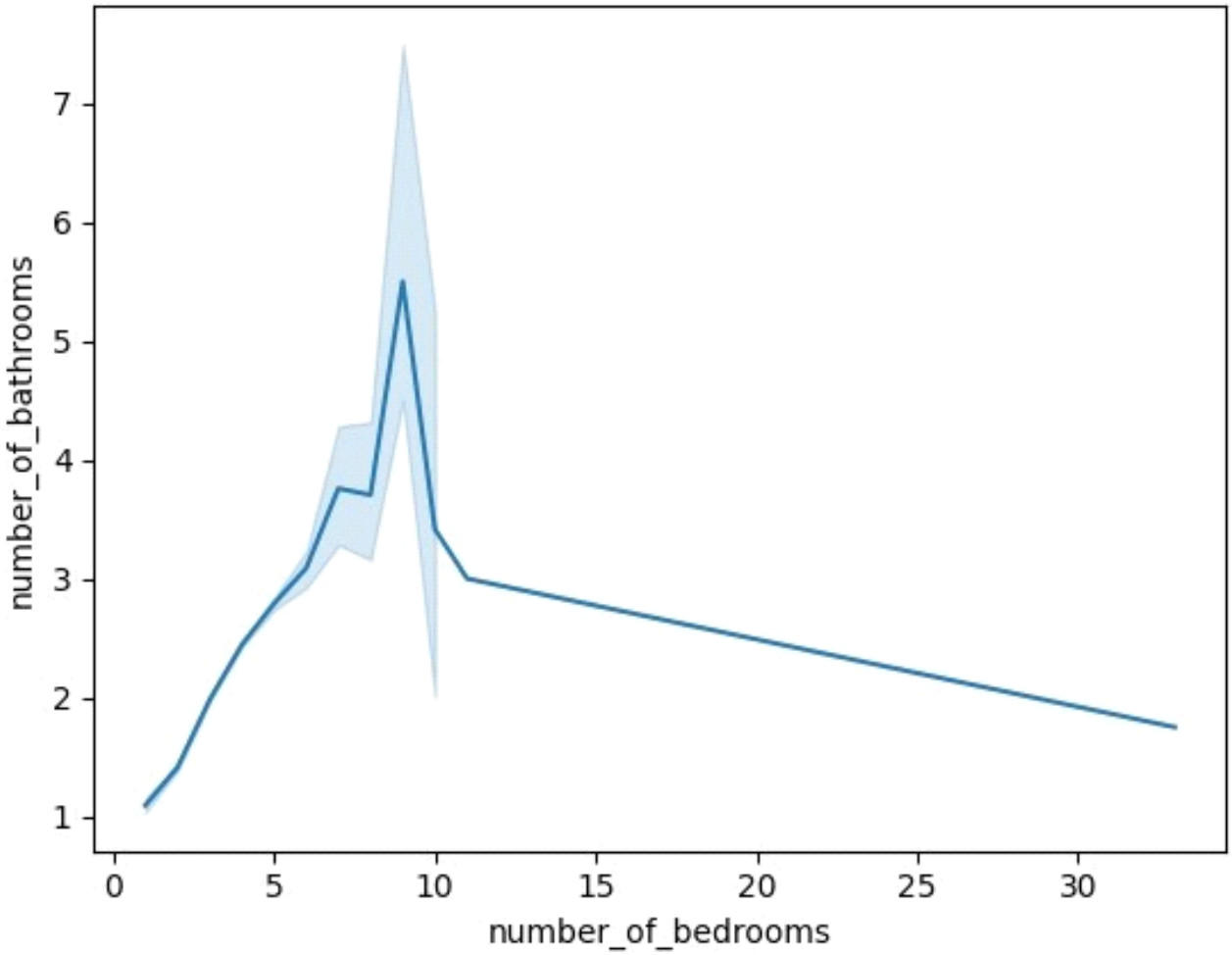
```
<seaborn.axisgrid.FacetGrid at 0x7815064595d0>
```



Bivariate Analysis

```
sns.lineplot(x=df['number_of_bedrooms'],y=df['number_of_bathrooms'])
```

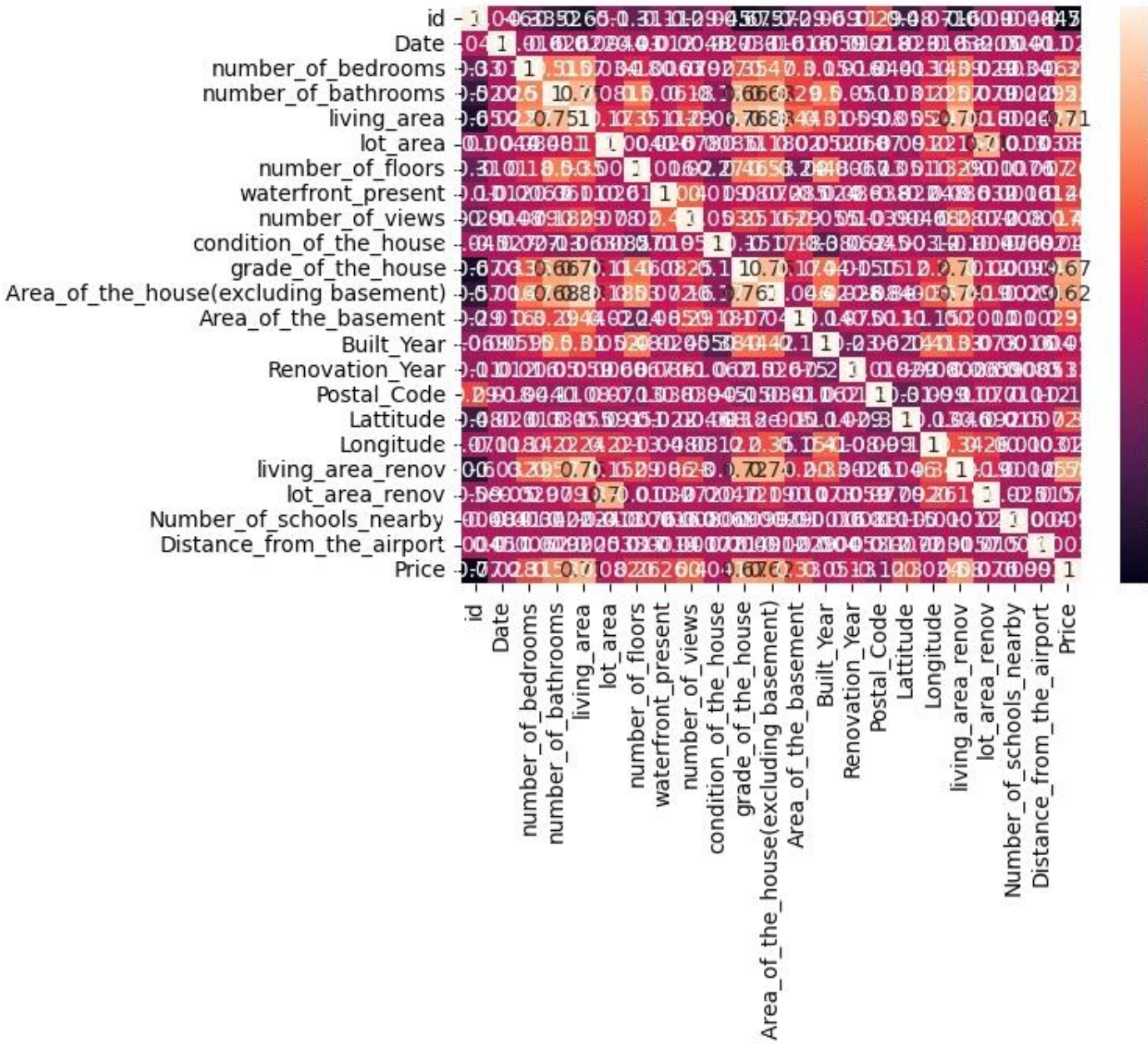
```
<Axes: xlabel='number_of_bedrooms', ylabel='number_of_bathrooms'>
```



MULTIVARIATE ANALYSIS

```
sns.heatmap(df.corr(),annot=True)
```

```
<Axes: >
```



TASK4 --- To perform the descriptive statistics (It shows all the numerical data)

```
  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
0.000000
0.000000
0.087193
0.007661
  mean                 2098.262996     1.509328e+04

  1.502360  std            928.275721   3.791962e+04

  0.540239  min            370.000000   5.200000e+02

  1.000000  25%           1440.000000   5.010750e+03

  1.000000

  50%     1930.000000   7.620000e+03          1.500000
0.000000

1.000000
0.000000
  75%                   2570.000000     1.080000e+04

  2.000000  max         13540.000000   1.074218e+06

  3.500000
```

	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	

TASK-05 ----- Check the missing values

There are no null values in the given dataset

```
df.isnull().sum()
```

----------*THANK YOU*----------