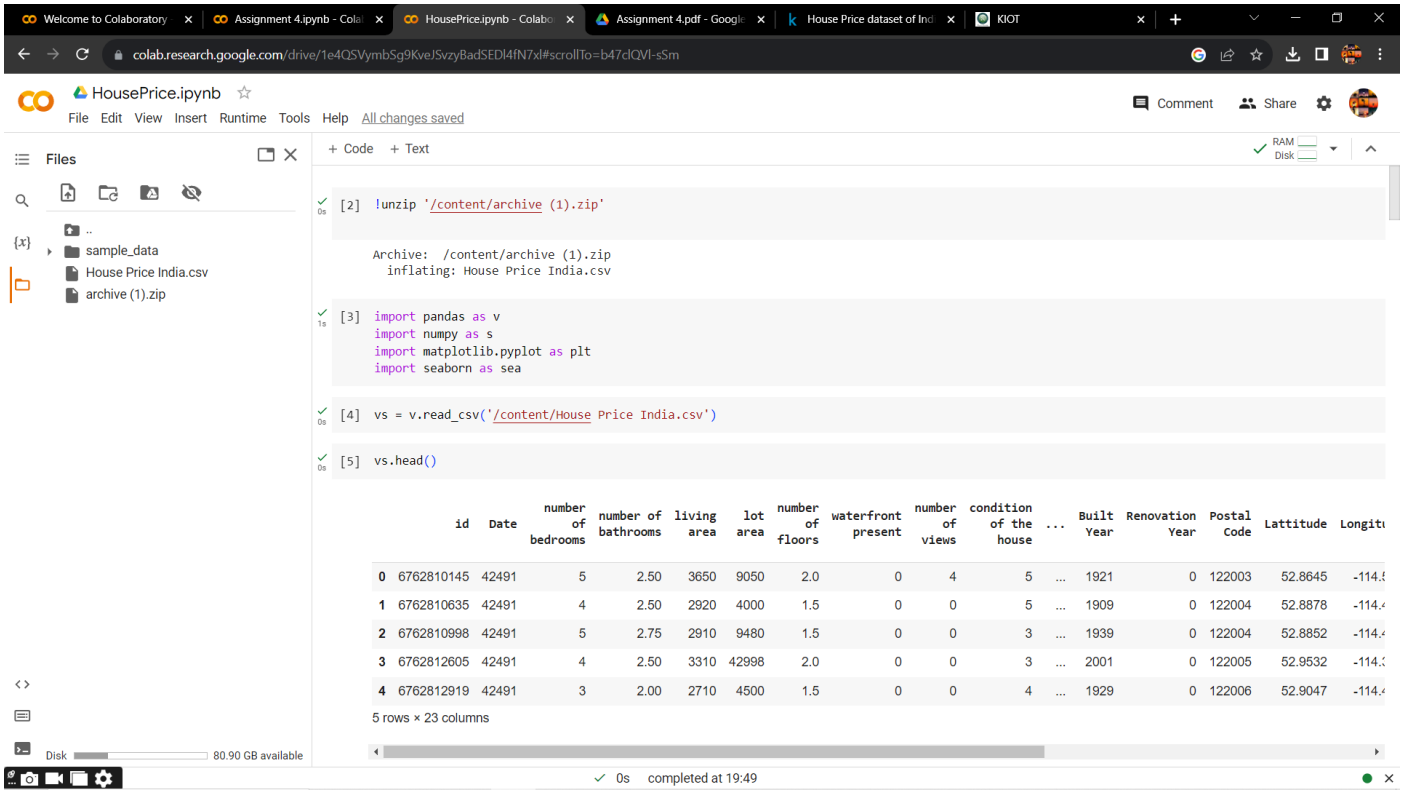
HOUSE PRICE ANALYSIS VISUALIZATION

NAME: VARSHINI S



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..
sample_data
House Price India.csv
archive (1).zip

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```
[2] !unzip '/content/archive (1).zip'
```

```
Archive:  /content/archive (1).zip
  inflating: House Price India.csv
```

```
[3] import pandas as v
    import numpy as s
    import matplotlib.pyplot as plt
    import seaborn as sea
```

```
[4] vs = v.read_csv('/content/House Price India.csv')
```

```
[5] vs.head()
```

	id	Date	number of bedrooms	number of bathrooms	living area	lot area	number of floors	waterfront present	number of views	condition of the house	...	Built Year	Renovation Year	Postal Code	Lattitude	Longiti
0	6762810145	42491	5	2.50	3650	9050	2.0	0	4	5	...	1921	0	122003	52.8645	-114.5
1	6762810635	42491	4	2.50	2920	4000	1.5	0	0	5	...	1909	0	122004	52.8878	-114.4
2	6762810998	42491	5	2.75	2910	9480	1.5	0	0	3	...	1939	0	122004	52.8852	-114.4
3	6762812605	42491	4	2.50	3310	42998	2.0	0	0	3	...	2001	0	122005	52.9532	-114.3
4	6762812919	42491	3	2.00	2710	4500	1.5	0	0	4	...	1929	0	122006	52.9047	-114.4

5 rows × 23 columns

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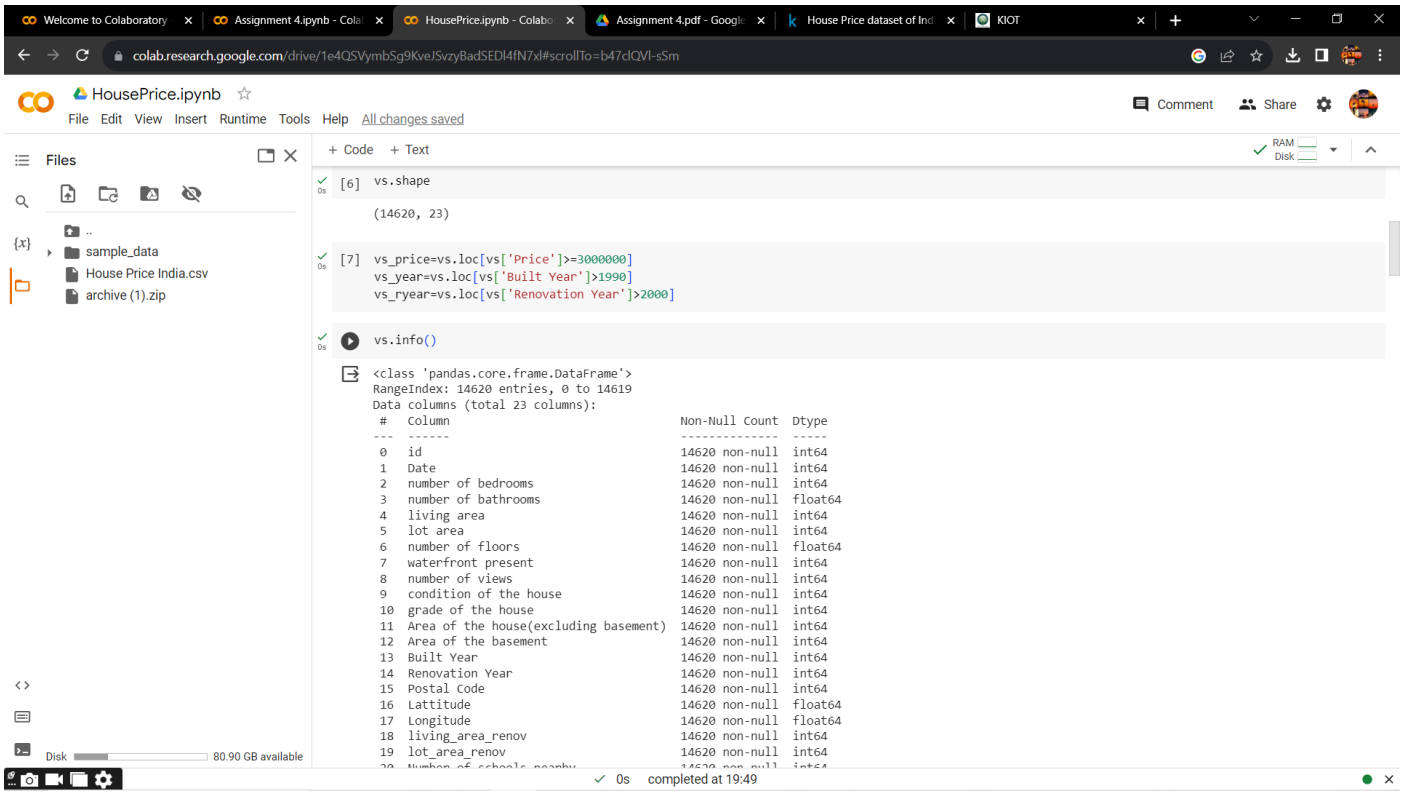

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```
[6] vs.shape
```

```
(14620, 23)
```

```
[7] vs_price=vs.loc[vs['Price']>=3000000]
    vs_year=vs.loc[vs['Built Year']>1990]
    vs_ryear=vs.loc[vs['Renovation Year']>2000]
```

```
vs.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 14620 entries, 0 to 14619
Data columns (total 23 columns):
 #   Column                                Non-Null Count  Dtype
---  ------                                --------------  -----
 0   id                                    14620 non-null  int64
 1   Date                                  14620 non-null  int64
 2   number of bedrooms                    14620 non-null  int64
 3   number of bathrooms                   14620 non-null  float64
 4   living area                           14620 non-null  int64
 5   lot area                              14620 non-null  int64
 6   number of floors                      14620 non-null  float64
 7   waterfront present                    14620 non-null  int64
 8   number of views                       14620 non-null  int64
 9   condition of the house                14620 non-null  int64
 10  grade of the house                    14620 non-null  int64
 11  Area of the house(excluding basement) 14620 non-null  int64
 12  Area of the basement                  14620 non-null  int64
 13  Built Year                            14620 non-null  int64
 14  Renovation Year                       14620 non-null  int64
 15  Postal Code                           14620 non-null  int64
 16  Lattitude                             14620 non-null  float64
 17  Longitude                             14620 non-null  float64
 18  living_area_renov                     14620 non-null  int64
 19  lot_area_renov                        14620 non-null  int64
```

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```
vs_price
```

	id	Date	number of bedrooms	number of bathrooms	living area	lot area	number of floors	waterfront present	number of views	condition of the house	...	Built Year	Renovation Year	Postal Code	Lattitude
243	6762810052	42496	7	4.50	6210	8856	2.5	0	2	5	...	1910	0	122061	52.8607
1622	6762810059	42518	6	4.25	6980	15682	3.0	0	4	4	...	1999	0	122057	52.7852
1697	6762810035	42519	4	3.50	5550	28078	2.0	0	2	4	...	2000	0	122071	52.8695
2424	6762810021	42531	5	4.50	10040	37325	2.0	1	2	3	...	1940	2001	122048	52.8800
2794	6762810027	42537	5	6.75	9640	13068	1.0	1	4	3	...	1983	2009	122057	52.7870
2907	6762810029	42538	4	3.00	6430	27517	2.0	0	0	3	...	2001	0	122048	52.8508
2908	6762810065	42538	4	4.25	4850	12445	2.0	1	4	5	...	1989	0	122033	52.9311
3234	6762810043	42543	3	4.50	5230	17826	2.0	1	4	3	...	2005	0	122057	52.7648
3376	6762810062	42544	4	5.00	4550	18641	1.0	1	4	3	...	2002	0	122019	52.8353
3946	6762810033	42551	5	5.50	7050	42840	1.0	0	2	4	...	1978	0	122048	52.8529
4061	6762810047	42552	5	6.25	8020	21738	2.0	0	0	3	...	2001	0	122027	52.7975
5887	6762810060	42579	5	5.25	5090	23669	2.0	0	0	3	...	2006	0	122048	52.8597
6244	6762810023	42585	5	5.75	9200	35069	2.0	0	0	3	...	2001	0	122071	52.8589
6674	6762810066	42592	3	3.50	4410	10756	2.0	1	4	3	...	2014	0	122053	52.7583
6781	6762810053	42593	4	3.25	7000	28206	1.0	1	4	4	...	1991	0	122020	52.8228
7627	6762810061	42606	3	3.00	3920	13085	2.0	1	4	4	...	1996	0	122057	52.8016
7736	6762810054	42607	4	4.00	4810	18851	2.0	0	3	3	...	2007	0	122048	52.8664

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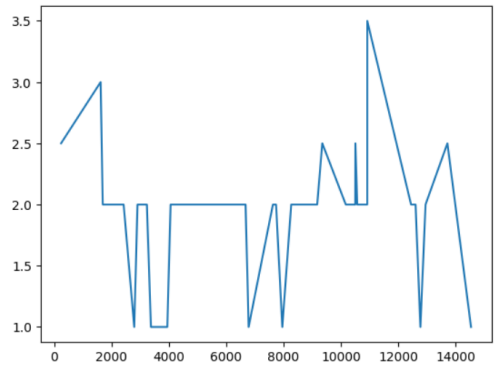
[9] 35 rows × 23 columns

```
plt.plot(vs_price['number of floors'])
```

```
[<matplotlib.lines.Line2D at 0x7ee71bf05360>]
```



[11]

```
plt.plot(vs_price['lot area'])
```

```
[<matplotlib.lines.Line2D at 0x7ee71bdeba60>]
```

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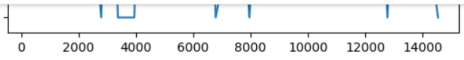
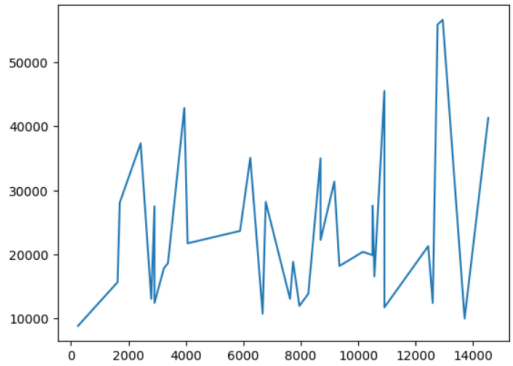
[10]




```
plt.plot(vs_price['lot area'])
```

```
[<matplotlib.lines.Line2D at 0x7ee71bdeba60>]
```




```
[12] plt.plot(vs_price['condition of the house'])
```

```
[<matplotlib.lines.Line2D at 0x7ee71be85300>]
```

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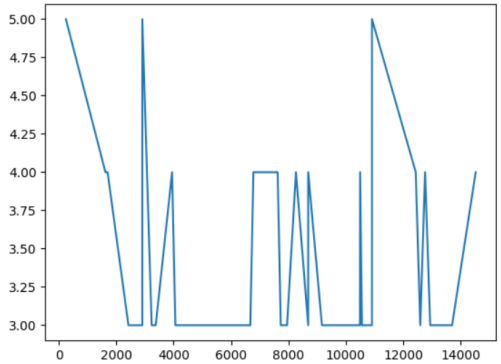
0 2000 4000 6000 8000 10000 12000 14000

```
plt.plot(vs_price['condition of the house'])
```

```
[<matplotlib.lines.Line2D at 0x7ee71be85300>]
```




```
[13] plt.figure(figsize=(50,50))
     sea.heatmap(vs.corr(),annot=True)
     plt.show()
```

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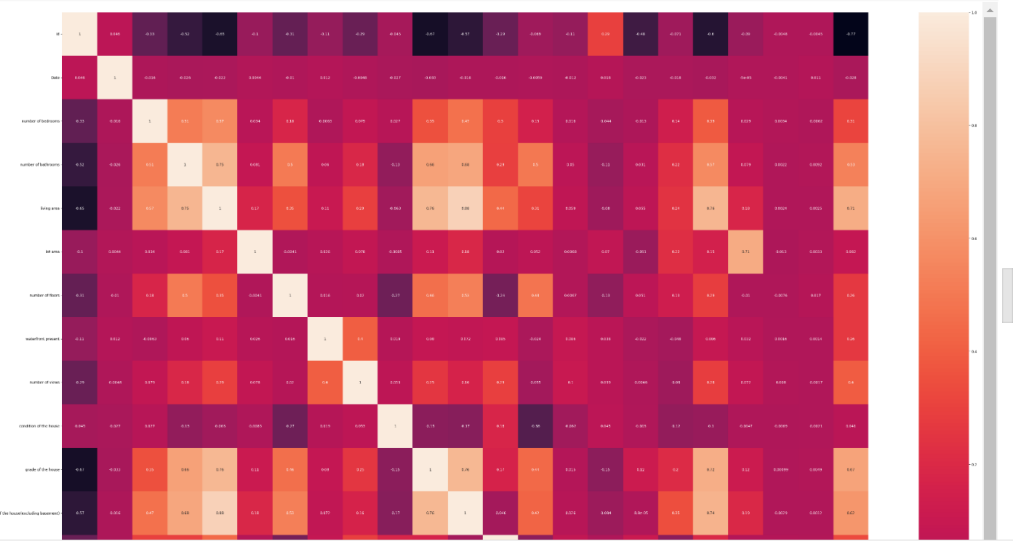
```
plt.figure(figsize=(50,50))
sea.heatmap(vs.corr(),annot=True)
plt.show()
```



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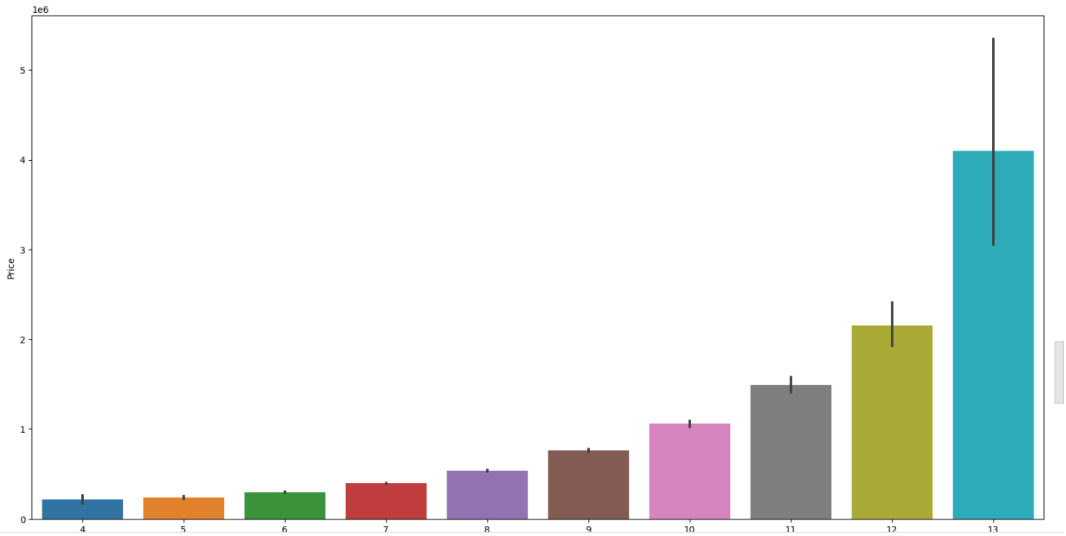
```
plt.figure(figsize=(20,10))
sea
sea.barplot(data=vs,x='grade of the house',y='Price')
```

```
<Axes: xlabel='grade of the house', ylabel='Price'>
```



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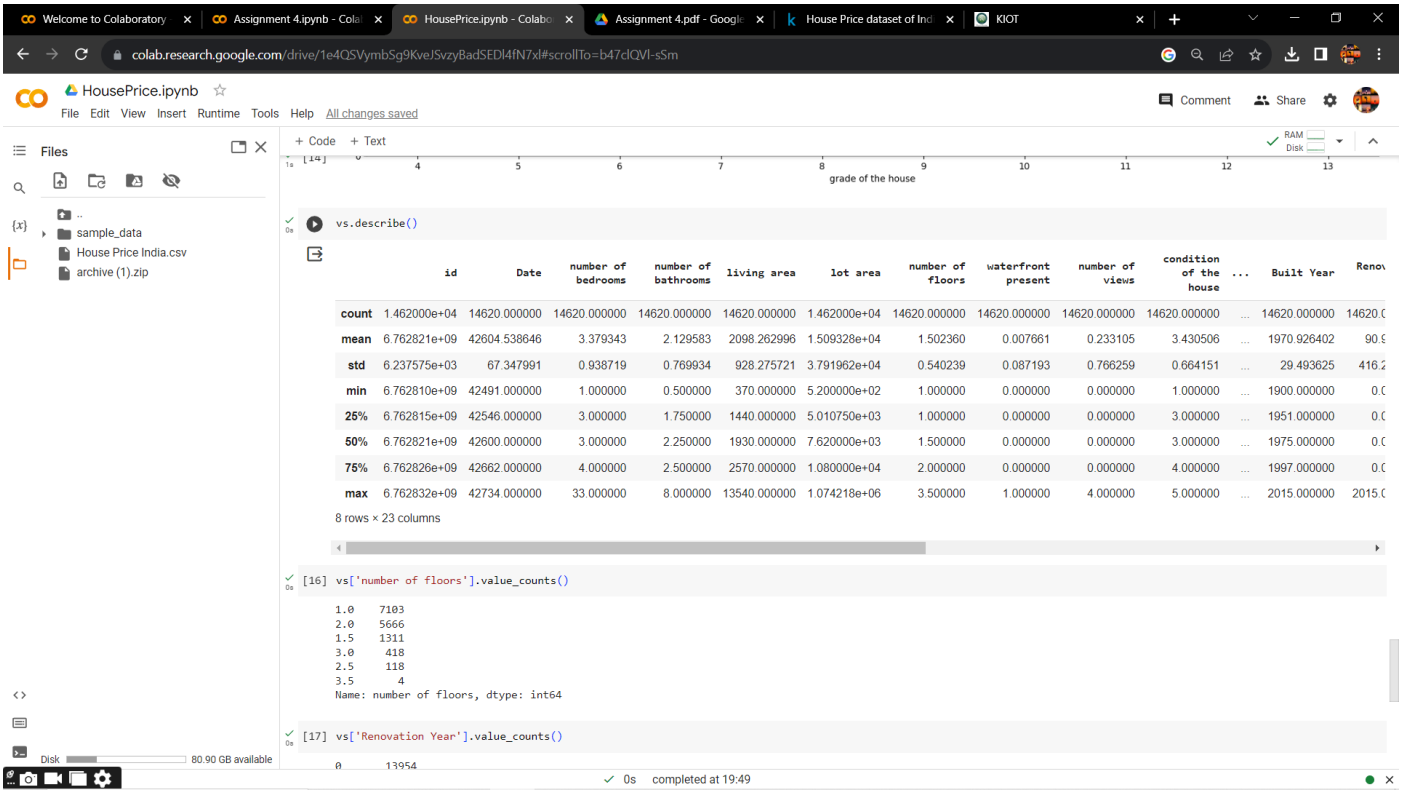
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grade of the house
vs.describe()
id Date number of bedrooms number of bathrooms living area lot area number of floors waterfront present number of views condition of the house ... Built Year Renov
count 1.462000e+04 14620.000000 14620.000000 14620.000000 14620.000000 1.462000e+04 14620.000000 14620.000000 14620.000000 14620.000000 ... 14620.000000 14620.0
mean 6.762821e+09 42604.538646 3.379343 2.129583 2098.262996 1.509328e+04 1.502360 0.007661 0.233105 3.430506 ... 1970.926402 90.9
std 6.237575e+03 67.347991 0.938719 0.769934 928.275721 3.791962e+04 0.540239 0.087193 0.766259 0.664151 ... 29.493625 416.2
min 6.762810e+09 42491.000000 1.000000 0.500000 370.000000 5.200000e+02 1.000000 0.000000 0.000000 1.000000 ... 1900.000000 0.0
25% 6.762815e+09 42546.000000 3.000000 1.750000 1440.000000 5.010750e+03 1.000000 0.000000 0.000000 3.000000 ... 1951.000000 0.0
50% 6.762821e+09 42600.000000 3.000000 2.250000 1930.000000 7.620000e+03 1.500000 0.000000 0.000000 3.000000 ... 1975.000000 0.0
75% 6.762826e+09 42662.000000 4.000000 2.500000 2570.000000 1.080000e+04 2.000000 0.000000 0.000000 4.000000 ... 1997.000000 0.0
max 6.762832e+09 42734.000000 33.000000 8.000000 13540.000000 1.074218e+06 3.500000 1.000000 4.000000 5.000000 ... 2015.000000 2015.0
8 rows × 23 columns
[16] vs['number of floors'].value_counts()
1.0 7103
2.0 5666
1.5 1311
3.0 418
2.5 118
3.5 4
Name: number of floors, dtype: int64
[17] vs['Renovation Year'].value_counts()
0 13954
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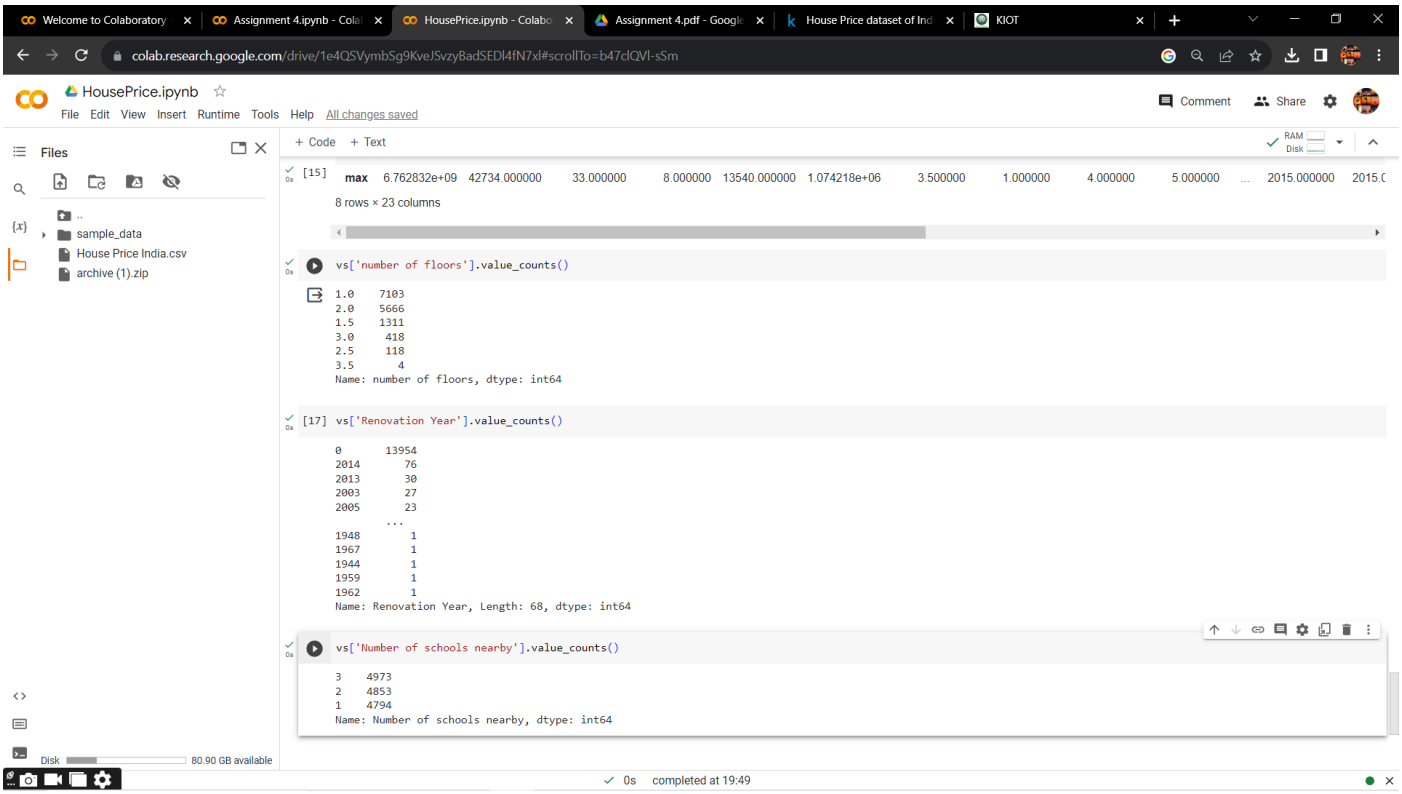
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[15] max 6.762832e+09 42734.000000 33.000000 8.000000 13540.000000 1.074218e+06 3.500000 1.000000 4.000000 5.000000 ... 2015.000000 2015.0
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vs['number of floors'].value_counts()
1.0 7103
2.0 5666
1.5 1311
3.0 418
2.5 118
3.5 4
Name: number of floors, dtype: int64
[17] vs['Renovation Year'].value_counts()
0 13954
2014 76
2013 30
2003 27
2005 23
1948 1
1967 1
1944 1
1959 1
1962 1
Name: Renovation Year, Length: 68, dtype: int64
vs['Number of schools nearby'].value_counts()
3 4973
2 4853
1 4794
Name: Number of schools nearby, dtype: int64
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