

```

#preprocessing the dataset
import pandas as pd
# Load the dataset into a pandas dataframe
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
#check basic information
print(df.head())
print(df.info())

```

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

	Latitude	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]

<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
20	Number of schools nearby	14620 non-null	int64
21	Distance from the airport	14620 non-null	int64
22	Price	14620 non-null	int64

dtypes: float64(4), int64(19)

memory usage: 2.6 MB

None

#drop the 'date' column

df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')

df.drop('Date', axis=1, inplace=True)

#convert the 'number of bedrooms' column to integer data type

df['number of bedrooms'] = df['number of bedrooms'].astype(int)

display(df)

	id	number of bedrooms	number of bathrooms	living area
0	6762810145	5	2.50	3650
1	6762810635	4	2.50	

2920			
2	6762810998	5	2.75
2910			
3	6762812605	4	2.50
3310			
4	6762812919	3	2.00
2710			
...
.			
14615	6762830250	2	1.50
1556			
14616	6762830339	3	2.00
1680			
14617	6762830618	2	1.00
1070			
14618	6762830709	4	1.00
1030			
14619	6762831463	3	1.00
900			

	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
...
14615	20000	1.0	0	0
14616	7000	1.5	0	0
14617	6120	1.0	0	0
14618	6621	1.0	0	0
14619	4770	1.0	0	0

	condition of the house	grade of the house	...	Built Year	\
0	5	10	...	1921	
1	5	8	...	1909	
2	3	8	...	1939	

3	3	9 ...	2001
4	4	8 ...	1929
...
14615	4	7 ...	1957
14616	4	7 ...	1968
14617	3	6 ...	1962
14618	4	6 ...	1955
14619	3	6 ...	1969

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov \				
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				
2	0	122004	52.8852	-114.468
2940				
3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the airport \
0	5400	2	
58			
1	4000	2	
51			
2	6600	1	
53			
3	42847	3	
76			
4	4500	1	
51			
...	
...			
14615	17286	3	
76			

14616	7480	3
59		
14617	6120	2
64		
14618	6631	3
54		
14619	3480	2
55		

	Price
0	2380000
1	1400000
2	1200000
3	838000
4	805000
...	...
14615	221700
14616	219200
14617	209000
14618	205000
14619	146000

[14620 rows x 22 columns]

#check for missing values

```
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
print(df.isna().sum())
print(df)
```

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

	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	

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov	\			
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				
2	0	122004	52.8852	-114.468
2940				

3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the airport \
0	5400	2	
58			
1	4000	2	
51			
2	6600	1	
53			
3	42847	3	
76			
4	4500	1	
51			
...	
...			
14615	17286	3	
76			
14616	7480	3	
59			
14617	6120	2	
64			
14618	6631	3	
54			
14619	3480	2	
55			

	Price
0	2380000
1	1400000
2	1200000
3	838000
4	805000
...	...
14615	221700

```

14616    219200
14617    209000
14618    205000
14619    146000

```

```
[14620 rows x 23 columns]
```

```
#drop the row with missing values
```

```
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
```

```
df.dropna(inplace=True)
```

```
display(df)
```

	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	

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov \				
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				
2	0	122004	52.8852	-114.468
2940				
3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the
airport \			
0	5400	2	
58			
1	4000	2	
51			
2	6600	1	
53			
3	42847	3	
76			
4	4500	1	
51			
...	
...			
14615	17286	3	
76			
14616	7480	3	
59			
14617	6120	2	
64			
14618	6631	3	
54			
14619	3480	2	
55			

	Price
0	2380000
1	1400000
2	1200000
3	838000
4	805000
...	...
14615	221700
14616	219200
14617	209000
14618	205000
14619	146000

[14620 rows x 23 columns]

```
#impute missing values with mean
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
df.fillna(df.mean(), inplace=True)
#impute missing values with the median
df.fillna(df.median(), inplace=True)
display(df)
```

	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

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov \				
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				
2	0	122004	52.8852	-114.468
2940				
3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the
airport \			
0	5400	2	
58			
1	4000	2	
51			
2	6600	1	
53			
3	42847	3	
76			
4	4500	1	
51			
...	

```

...
14615          17286          3
76
14616          7480          3
59
14617          6120          2
64
14618          6631          3
54
14619          3480          2
55

```

```

      Price
0    2380000
1    1400000
2    1200000
3     838000
4     805000
...
14615    221700
14616    219200
14617    209000
14618    205000
14619    146000

```

[14620 rows x 23 columns]

```

#convert categorical variable into numerical variables using one-hot
encoding
df = pd.get_dummies(df, columns=['waterfront present', 'Built Year',
'Postal Code'])
display(df)

```

```

      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  number of views \
0          3650    9050          2.0          4
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

	condition of the house	grade of the house	...	Postal
Code_122063 \				

0	5	10	...
0			
1	5	8	...
0			
2	3	8	...
0			
3	3	9	...
0			
4	4	8	...
0			
...
...			
14615	4	7	...
0			
14616	4	7	...
0			
14617	3	6	...
0			
14618	4	6	...
0			
14619	3	6	...
0			

	Postal Code_122064	Postal Code_122065	Postal Code_122066	\
0	0	0	0	
1	0	0	0	
2	0	0	0	
3	0	0	0	
4	0	0	0	
...	
14615	0	0	1	
14616	0	0	0	
14617	0	0	0	
14618	0	0	0	
14619	0	0	0	

	Postal Code_122067	Postal Code_122068	Postal Code_122069	\
0	0	0	0	
1	0	0	0	

2	0	0	0
3	0	0	0
4	0	0	0
...
14615	0	0	0
14616	0	0	0
14617	0	0	0
14618	0	0	0
14619	0	0	0

	Postal Code_122070	Postal Code_122071	Postal Code_122072
0	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
...
14615	0	0	0
14616	0	0	1
14617	0	0	0
14618	0	0	0
14619	0	0	0

[14620 rows x 208 columns]

```
#split the dataset into training and testing sets
from sklearn.model_selection import train_test_split
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
X = df.drop('Price', axis=1)
y = df['Price']
X_train, X_test, y_train, y_test = train_test_split(X, y,
test_size=0.2, random_state=42)
display(df)
```

	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	

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov \				
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				
2	0	122004	52.8852	-114.468
2940				
3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the airport	\
--	----------------	--------------------------	---------------------------	---

0	5400	2
58		
1	4000	2
51		
2	6600	1
53		
3	42847	3
76		
4	4500	1
51		
...
...		
14615	17286	3
76		
14616	7480	3
59		
14617	6120	2
64		
14618	6631	3
54		
14619	3480	2
55		

	Price
0	2380000
1	1400000
2	1200000
3	838000
4	805000
...	...
14615	221700
14616	219200
14617	209000
14618	205000
14619	146000

[14620 rows x 23 columns]

```
#building the ANN model
from keras.models import Sequential
from keras.layers import Dense
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
#define the model architecture
model = Sequential()
model.add(Dense(64, input_dim=X_train.shape[1], activation='relu'))
model.add(Dense(32, activation='relu'))
model.add(Dense(1, activation='linear'))
#compile the model
model.compile(loss='mean_squared_error', optimizer='adam',
metrics=['mean_squared_error'])
```



```
#train the model
```

```
model.fit(X_train, y_train, epochs=50, batch_size=32)  
display(df)
```

```
Epoch 1/50
```

```
366/366 [=====] - 2s 3ms/step - loss:  
200632132698112.0000 - mean_squared_error: 200632132698112.0000
```

```
Epoch 2/50
```

```
366/366 [=====] - 1s 3ms/step - loss:  
192855572480.0000 - mean_squared_error: 192855572480.0000
```

```
Epoch 3/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
337801805824.0000 - mean_squared_error: 337801805824.0000
```

```
Epoch 4/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
2269407608832.0000 - mean_squared_error: 2269407608832.0000
```

```
Epoch 5/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
30485159870464.0000 - mean_squared_error: 30485159870464.0000
```

```
Epoch 6/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
13260391710720.0000 - mean_squared_error: 13260391710720.0000
```

```
Epoch 7/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
20270043627520.0000 - mean_squared_error: 20270043627520.0000
```

```
Epoch 8/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
20007740243968.0000 - mean_squared_error: 20007740243968.0000
```

```
Epoch 9/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
22758824083456.0000 - mean_squared_error: 22758824083456.0000
```

```
Epoch 10/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
18359703830528.0000 - mean_squared_error: 18359703830528.0000
```

```
Epoch 11/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
19714839412736.0000 - mean_squared_error: 19714839412736.0000
```

```
Epoch 12/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
19308413452288.0000 - mean_squared_error: 19308413452288.0000
```

```
Epoch 13/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
18749774102528.0000 - mean_squared_error: 18749774102528.0000
```

```
Epoch 14/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
18597451661312.0000 - mean_squared_error: 18597451661312.0000
```

```
Epoch 15/50
```

```
366/366 [=====] - 1s 2ms/step - loss:  
19730008113152.0000 - mean_squared_error: 19730008113152.0000
```

```
Epoch 16/50
```

366/366 [=====] - 1s 2ms/step - loss:
17491349733376.0000 - mean_squared_error: 17491349733376.0000
Epoch 17/50
366/366 [=====] - 1s 3ms/step - loss:
17773098958848.0000 - mean_squared_error: 17773098958848.0000
Epoch 18/50
366/366 [=====] - 1s 3ms/step - loss:
16122558545920.0000 - mean_squared_error: 16122558545920.0000
Epoch 19/50
366/366 [=====] - 1s 3ms/step - loss:
19060121141248.0000 - mean_squared_error: 19060121141248.0000
Epoch 20/50
366/366 [=====] - 1s 3ms/step - loss:
235399439974400.0000 - mean_squared_error: 235399439974400.0000
Epoch 21/50
366/366 [=====] - 1s 3ms/step - loss:
214273982464.0000 - mean_squared_error: 214273982464.0000
Epoch 22/50
366/366 [=====] - 1s 2ms/step - loss:
278393257984.0000 - mean_squared_error: 278393257984.0000
Epoch 23/50
366/366 [=====] - 1s 2ms/step - loss:
414115856384.0000 - mean_squared_error: 414115856384.0000
Epoch 24/50
366/366 [=====] - 1s 2ms/step - loss:
931880304640.0000 - mean_squared_error: 931880304640.0000
Epoch 25/50
366/366 [=====] - 1s 2ms/step - loss:
15196713123840.0000 - mean_squared_error: 15196713123840.0000
Epoch 26/50
366/366 [=====] - 1s 2ms/step - loss:
17709668499456.0000 - mean_squared_error: 17709668499456.0000
Epoch 27/50
366/366 [=====] - 1s 2ms/step - loss:
16694032465920.0000 - mean_squared_error: 16694032465920.0000
Epoch 28/50
366/366 [=====] - 1s 2ms/step - loss:
15147645009920.0000 - mean_squared_error: 15147645009920.0000
Epoch 29/50
366/366 [=====] - 1s 2ms/step - loss:
15231653773312.0000 - mean_squared_error: 15231653773312.0000
Epoch 30/50
366/366 [=====] - 1s 2ms/step - loss:
15058609373184.0000 - mean_squared_error: 15058609373184.0000
Epoch 31/50
366/366 [=====] - 1s 2ms/step - loss:
14874152271872.0000 - mean_squared_error: 14874152271872.0000
Epoch 32/50
366/366 [=====] - 1s 2ms/step - loss:
15957810479104.0000 - mean_squared_error: 15957810479104.0000

Epoch 33/50
366/366 [=====] - 1s 2ms/step - loss: 14542455177216.0000 - mean_squared_error: 14542455177216.0000
Epoch 34/50
366/366 [=====] - 1s 2ms/step - loss: 14233113722880.0000 - mean_squared_error: 14233113722880.0000
Epoch 35/50
366/366 [=====] - 1s 3ms/step - loss: 14346975444992.0000 - mean_squared_error: 14346975444992.0000
Epoch 36/50
366/366 [=====] - 1s 3ms/step - loss: 14532047011840.0000 - mean_squared_error: 14532047011840.0000
Epoch 37/50
366/366 [=====] - 1s 3ms/step - loss: 14912918126592.0000 - mean_squared_error: 14912918126592.0000
Epoch 38/50
366/366 [=====] - 1s 3ms/step - loss: 12931882287104.0000 - mean_squared_error: 12931882287104.0000
Epoch 39/50
366/366 [=====] - 1s 2ms/step - loss: 14798681014272.0000 - mean_squared_error: 14798681014272.0000
Epoch 40/50
366/366 [=====] - 1s 2ms/step - loss: 11656067284992.0000 - mean_squared_error: 11656067284992.0000
Epoch 41/50
366/366 [=====] - 1s 2ms/step - loss: 13240746639360.0000 - mean_squared_error: 13240746639360.0000
Epoch 42/50
366/366 [=====] - 1s 2ms/step - loss: 17319711473664.0000 - mean_squared_error: 17319711473664.0000
Epoch 43/50
366/366 [=====] - 1s 2ms/step - loss: 9401361498112.0000 - mean_squared_error: 9401361498112.0000
Epoch 44/50
366/366 [=====] - 1s 2ms/step - loss: 12246226829312.0000 - mean_squared_error: 12246226829312.0000
Epoch 45/50
366/366 [=====] - 1s 2ms/step - loss: 12621315047424.0000 - mean_squared_error: 12621315047424.0000
Epoch 46/50
366/366 [=====] - 1s 2ms/step - loss: 11537283547136.0000 - mean_squared_error: 11537283547136.0000
Epoch 47/50
366/366 [=====] - 1s 2ms/step - loss: 13200380657664.0000 - mean_squared_error: 13200380657664.0000
Epoch 48/50
366/366 [=====] - 1s 2ms/step - loss: 11707709652992.0000 - mean_squared_error: 11707709652992.0000
Epoch 49/50
366/366 [=====] - 1s 2ms/step - loss:

13745899175936.0000 - mean_squared_error: 13745899175936.0000

Epoch 50/50

366/366 [=====] - 1s 2ms/step - loss:

8161715027968.0000 - mean_squared_error: 8161715027968.0000

	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	

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov \				
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				

2	0	122004	52.8852	-114.468
2940				
3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the airport \
0	5400	2	
58			
1	4000	2	
51			
2	6600	1	
53			
3	42847	3	
76			
4	4500	1	
51			
...	
...			
14615	17286	3	
76			
14616	7480	3	
59			
14617	6120	2	
64			
14618	6631	3	
54			
14619	3480	2	
55			

	Price
0	2380000
1	1400000
2	1200000
3	838000
4	805000

```

...
14615    221700
14616    219200
14617    209000
14618    205000
14619    146000

```

```
[14620 rows x 23 columns]
```

```
#testing the model
```

```
df = pd.read_csv('/content/drive/MyDrive/House Price India.csv')
```

```
#evaluate the model on the test set
```

```
test_loss, test_acc = model.evaluate(X_test, y_test)
```

```
#print the test accuracy
```

```
print('Test Accuracy:', test_acc)
```

```
display(df)
```

```
92/92 [=====] - 0s 3ms/step - loss:
```

```
7946286661632.0000 - mean_squared_error: 7946286661632.0000
```

```
Test Accuracy: 7946286661632.0
```

	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

	Renovation Year	Postal Code	Lattitude	Longitude
living_area_renov \				
0	0	122003	52.8645	-114.557
2880				
1	0	122004	52.8878	-114.470
2470				
2	0	122004	52.8852	-114.468
2940				
3	0	122005	52.9532	-114.321
3350				
4	0	122006	52.9047	-114.485
2060				
...
...				
14615	0	122066	52.6191	-114.472
2250				
14616	0	122072	52.5075	-114.393
1540				
14617	0	122056	52.7289	-114.507
1130				
14618	0	122042	52.7157	-114.411
1420				
14619	2009	122018	52.5338	-114.552
900				

	lot_area_renov	Number of schools nearby	Distance from the
airport \			
0	5400	2	
58			
1	4000	2	
51			
2	6600	1	
53			
3	42847	3	
76			
4	4500	1	
51			
...	
...			
14615	17286	3	

76		
14616	7480	3
59		
14617	6120	2
64		
14618	6631	3
54		
14619	3480	2
55		

	Price
0	2380000
1	1400000
2	1200000
3	838000
4	805000
...	...
14615	221700
14616	219200
14617	209000
14618	205000
14619	146000

[14620 rows x 23 columns]