In [1]:
```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

In [2]:
```
df=pd.read_csv(r"C:\Users\91720\Downloads\used_cars_data.csv")
df
```

Out[2]:

	S.No.	Name	Location	Year	Kilometers_Driven	Fuel_Type	Transmission	Owner_Type	Mileage	Engine	Power	Seats	New_Price
0	0	Maruti Wagon R LXI CNG	Mumbai	2010	72000	CNG	Manual	First	26.6 km/kg	998 CC	58.16 bhp	5.0	NaN
1	1	Hyundai Creta 1.6 CRDi SX Option	Pune	2015	41000	Diesel	Manual	First	19.67 kmpl	1582 CC	126.2 bhp	5.0	NaN
2	2	Honda Jazz V	Chennai	2011	46000	Petrol	Manual	First	18.2 kmpl	1199 CC	88.7 bhp	5.0	8.61 Lakh
3	3	Maruti Ertiga VDI	Chennai	2012	87000	Diesel	Manual	First	20.77 kmpl	1248 CC	88.76 bhp	7.0	NaN
4	4	Audi A4 New 2.0 TDI Multitronic	Coimbatore	2013	40670	Diesel	Automatic	Second	15.2 kmpl	1968 CC	140.8 bhp	5.0	NaN
...	...	...	...	...	...	...	...	...	...	...	...	...	...
7248	7248	Volkswagen Vento Diesel Trendline	Hyderabad	2011	89411	Diesel	Manual	First	20.54 kmpl	1598 CC	103.6 bhp	5.0	NaN
7249	7249	Volkswagen Polo GT TSI	Mumbai	2015	59000	Petrol	Automatic	First	17.21 kmpl	1197 CC	103.6 bhp	5.0	NaN
7250	7250	Nissan Micra Diesel XV	Kolkata	2012	28000	Diesel	Manual	First	23.08 kmpl	1461 CC	63.1 bhp	5.0	NaN
7251	7251	Volkswagen Polo GT TSI	Pune	2013	52262	Petrol	Automatic	Third	17.2 kmpl	1197 CC	103.6 bhp	5.0	NaN
7252	7252	Mercedes-Benz E-Class 2009-2013 E 220 CDI Avan...	Kochi	2014	72443	Diesel	Automatic	First	10.0 kmpl	2148 CC	170 bhp	5.0	NaN

7253 rows × 14 columns

In [3]:
```
df.head()
```

Out[3]:

	S.No.	Name	Location	Year	Kilometers_Driven	Fuel_Type	Transmission	Owner_Type	Mileage	Engine	Power	Seats	New_Price	Pric
0	0	Maruti Wagon R LXI CNG	Mumbai	2010	72000	CNG	Manual	First	26.6 km/kg	998 CC	58.16 bhp	5.0	NaN	1.7
1	1	Hyundai Creta 1.6 CRDi SX Option	Pune	2015	41000	Diesel	Manual	First	19.67 kmpl	1582 CC	126.2 bhp	5.0	NaN	12.5
2	2	Honda Jazz V	Chennai	2011	46000	Petrol	Manual	First	18.2 kmpl	1199 CC	88.7 bhp	5.0	8.61 Lakh	4.5
3	3	Maruti Ertiga VDI	Chennai	2012	87000	Diesel	Manual	First	20.77 kmpl	1248 CC	88.76 bhp	7.0	NaN	6.0
4	4	Audi A4 New 2.0 TDI Multitronic	Coimbatore	2013	40670	Diesel	Automatic	Second	15.2 kmpl	1968 CC	140.8 bhp	5.0	NaN	17.7

In [4]:
```
df.describe()
```

Out[4]:

	S.No.	Year	Kilometers_Driven	Seats	Price
count	7253.000000	7253.000000	7.253000e+03	7200.000000	6019.000000
mean	3626.000000	2013.365366	5.869906e+04	5.279722	9.479468
std	2093.905084	3.254421	8.442772e+04	0.811660	11.187917
min	0.000000	1996.000000	1.710000e+02	0.000000	0.440000
25%	1813.000000	2011.000000	3.400000e+04	5.000000	3.500000
50%	3626.000000	2014.000000	5.341600e+04	5.000000	5.640000
75%	5439.000000	2016.000000	7.300000e+04	5.000000	9.950000
max	7252.000000	2019.000000	6.500000e+06	10.000000	160.000000

In [5]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7253 entries, 0 to 7252
Data columns (total 14 columns):
 #   Column             Non-Null Count  Dtype  
---  ------             --------------  -----  
 0   S.No.              7253 non-null   int64  
 1   Name               7253 non-null   object 
 2   Location           7253 non-null   object 
 3   Year               7253 non-null   int64  
 4   Kilometers_Driven  7253 non-null   int64  
 5   Fuel_Type          7253 non-null   object 
 6   Transmission       7253 non-null   object 
 7   Owner_Type         7253 non-null   object 
 8   Mileage            7251 non-null   object 
 9   Engine             7207 non-null   object 
 10  Power              7207 non-null   object 
 11  Seats              7200 non-null   float64
 12  New_Price          1006 non-null   object 
 13  Price              6019 non-null   float64
dtypes: float64(2), int64(3), object(9)
memory usage: 793.4+ KB
```

In [6]:
```
df.fillna(method='ffill',inplace=True)
```

In [7]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7253 entries, 0 to 7252
Data columns (total 14 columns):
 #   Column             Non-Null Count  Dtype  
---  ------             --------------  -----  
 0   S.No.              7253 non-null   int64  
 1   Name               7253 non-null   object 
 2   Location           7253 non-null   object 
 3   Year               7253 non-null   int64  
 4   Kilometers_Driven  7253 non-null   int64  
 5   Fuel_Type          7253 non-null   object 
 6   Transmission       7253 non-null   object 
 7   Owner_Type         7253 non-null   object 
 8   Mileage            7253 non-null   object 
 9   Engine             7253 non-null   object 
 10  Power              7253 non-null   object 
 11  Seats              7253 non-null   float64
 12  New_Price          7251 non-null   object 
 13  Price              7253 non-null   float64
dtypes: float64(2), int64(3), object(9)
memory usage: 793.4+ KB
```

In [8]:
```
df.dropna(inplace=True)
```

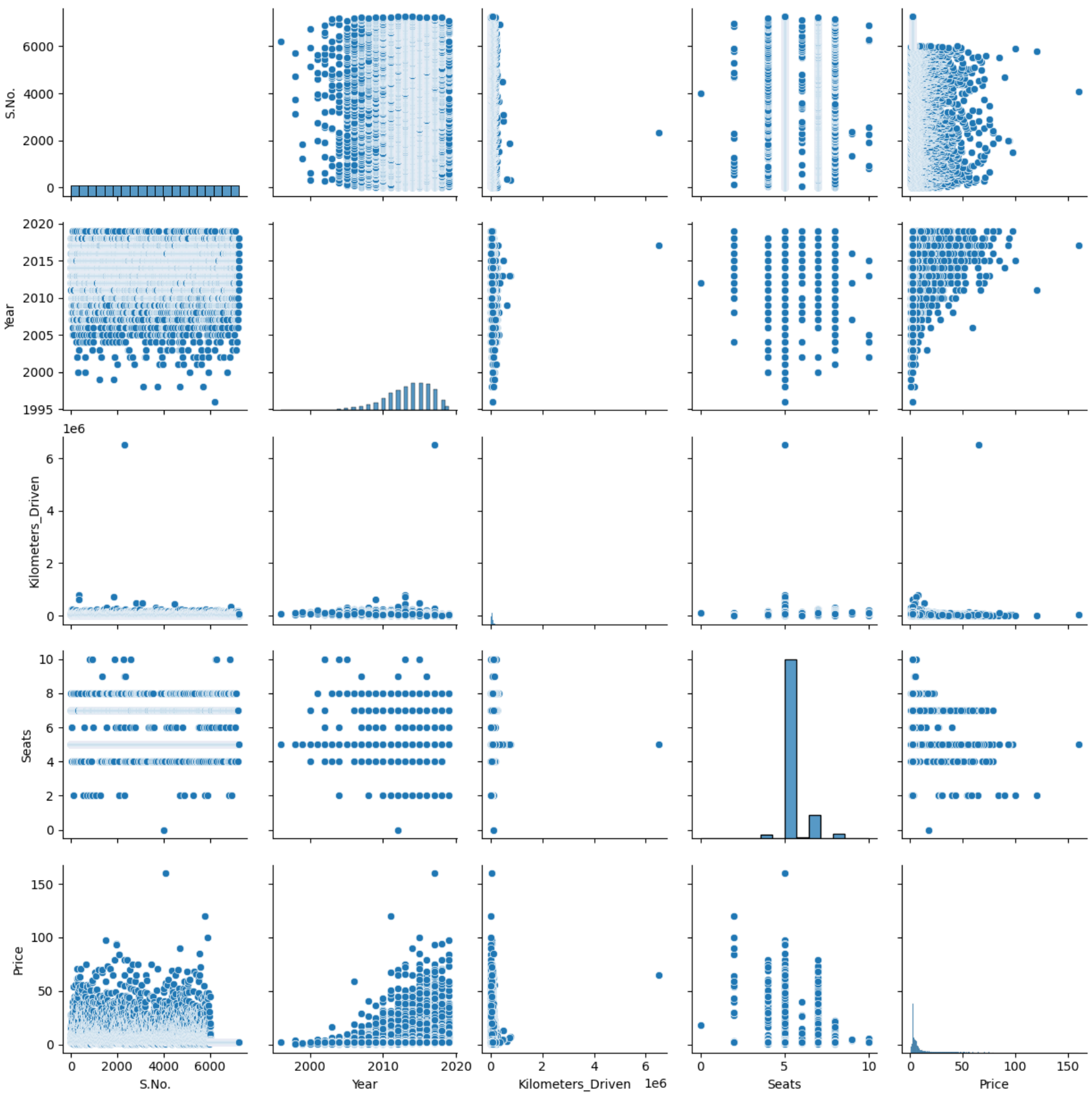
In [9]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Index: 7251 entries, 2 to 7252
Data columns (total 14 columns):
 #   Column             Non-Null Count  Dtype  
---  ------             --------------  -----  
 0   S.No.              7251 non-null   int64  
 1   Name               7251 non-null   object 
 2   Location           7251 non-null   object 
 3   Year               7251 non-null   int64  
 4   Kilometers_Driven  7251 non-null   int64  
 5   Fuel_Type          7251 non-null   object 
 6   Transmission       7251 non-null   object 
 7   Owner_Type         7251 non-null   object 
 8   Mileage            7251 non-null   object 
 9   Engine             7251 non-null   object 
 10  Power              7251 non-null   object 
 11  Seats              7251 non-null   float64
 12  New_Price          7251 non-null   object 
 13  Price              7251 non-null   float64
dtypes: float64(2), int64(3), object(9)
memory usage: 849.7+ KB
```

EXPLORATORY DATA ANALYSIS

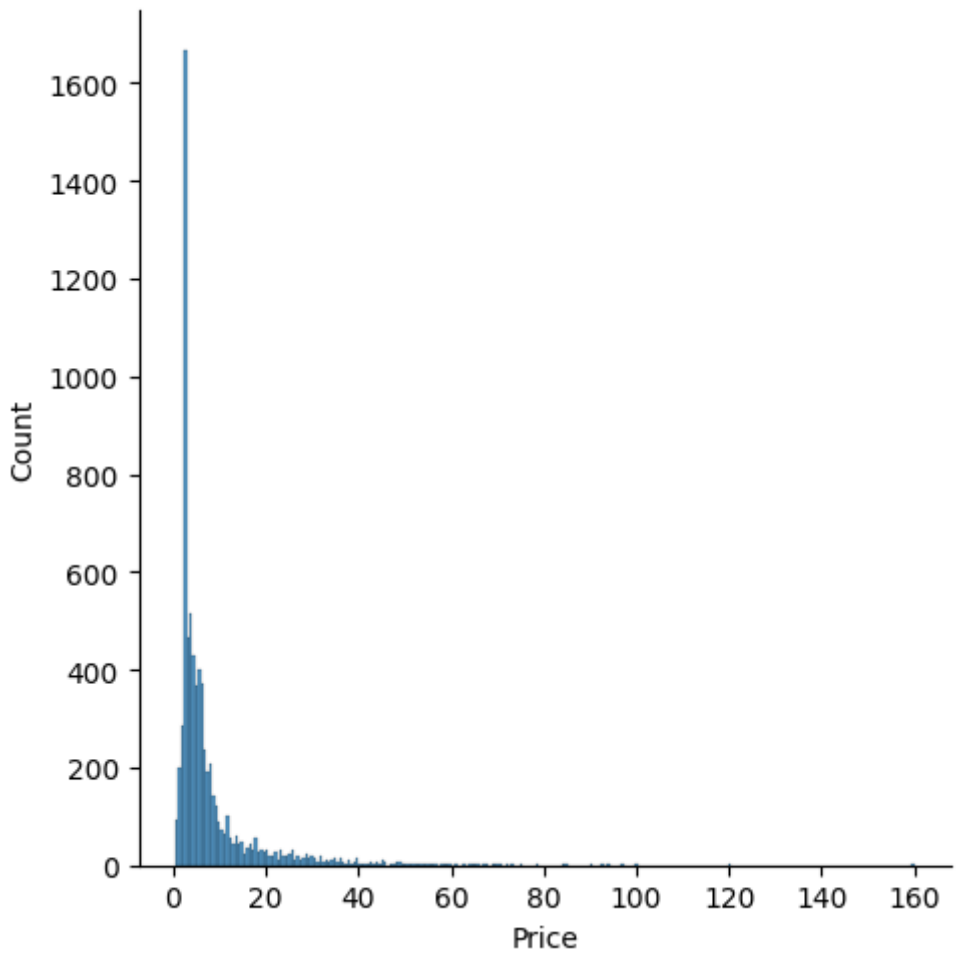
In [10]:
```
sns.pairplot(df)
```

Out[10]: <seaborn.axisgrid.PairGrid at 0x2a2a1fd5110>



In [11]:
```
sns.displot(df['Price'])
```

Out[11]: <seaborn.axisgrid.FacetGrid at 0x2a2a5e95690>



In [12]:
```
sns.displot(df['Mileage'])
```

Out[12]: <seaborn.axisgrid.FacetGrid at 0x2a2a777ee10>