In [1]:
```
import pandas as pd
data=pd.read_csv("/home/placement/Downloads/fiat500.csv")
print(data)
```

```
        ID   model  engine_power  age_in_days      km  previous_owners  \
0        1  lounge            51          882   25000                1
1        2     pop            51         1186   32500                1
2        3   sport            74         4658  142228                1
3        4  lounge            51         2739  160000                1
4        5     pop            73         3074  106880                1
...    ...     ...           ...          ...     ...              ...
1533  1534   sport            51         3712  115280                1
1534  1535  lounge            74         3835  112000                1
1535  1536     pop            51         2223   60457                1
1536  1537  lounge            51         2557   80750                1
1537  1538     pop            51         1766   54276                1

            lat        lon  price
0     44.907242   8.611560   8900
1     45.666359  12.241890   8800
2     45.503300  11.417840   4200
3     40.633171  17.634609   6000
4     41.903221  12.495650   5700
```

In [2]:
```
data.columns
```

Out[2]:
```
Index(['ID', 'model', 'engine_power', 'age_in_days', 'km', 'previous_owners',
       'lat', 'lon', 'price'],
      dtype='object')
```

In [3]:
```
data.head(10)
```

Out[3]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.611560	8900
1	2	pop	51	1186	32500	1	45.666359	12.241890	8800
2	3	sport	74	4658	142228	1	45.503300	11.417840	4200
3	4	lounge	51	2739	160000	1	40.633171	17.634609	6000
4	5	pop	73	3074	106880	1	41.903221	12.495650	5700
5	6	pop	74	3623	70225	1	45.000702	7.682270	7900
6	7	lounge	51	731	11600	1	44.907242	8.611560	10750
7	8	lounge	51	1521	49076	1	41.903221	12.495650	9190
8	9	sport	73	4049	76000	1	45.548000	11.549470	5600
9	10	sport	51	3653	89000	1	45.438301	10.991700	6000

```
In [4]: data.tail(10)
```

Out[4]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
1528	1529	lounge	51	2861	126000	1	43.841980	10.51531	5500
1529	1530	lounge	51	731	22551	1	38.122070	13.36112	9900
1530	1531	lounge	51	670	29000	1	45.764648	8.99450	10800
1531	1532	sport	73	4505	127000	1	45.528511	9.59323	4750
1532	1533	pop	51	1917	52008	1	45.548000	11.54947	9900
1533	1534	sport	51	3712	115280	1	45.069679	7.70492	5200
1534	1535	lounge	74	3835	112000	1	45.845692	8.66687	4600
1535	1536	pop	51	2223	60457	1	45.481541	9.41348	7500
1536	1537	lounge	51	2557	80750	1	45.000702	7.68227	5990
1537	1538	pop	51	1766	54276	1	40.323410	17.56827	7900

```
In [6]: data.describe()
```

Out[6]:

	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
count	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000
mean	769.500000	51.904421	1650.980494	53396.011704	1.123537	43.541361	11.563428	8576.003901
std	444.126671	3.988023	1289.522278	40046.830723	0.416423	2.133518	2.328190	1939.958641
min	1.000000	51.000000	366.000000	1232.000000	1.000000	36.855839	7.245400	2500.000000
25%	385.250000	51.000000	670.000000	20006.250000	1.000000	41.802990	9.505090	7122.500000
50%	769.500000	51.000000	1035.000000	39031.000000	1.000000	44.394096	11.869260	9000.000000
75%	1153.750000	51.000000	2616.000000	79667.750000	1.000000	45.467960	12.769040	10000.000000
max	1538.000000	77.000000	4658.000000	235000.000000	4.000000	46.795612	18.365520	11100.000000

```
In [8]: data.shape

Out[8]: (1538, 9)
```

In [10]:
```
data[['ID','price']].head(10)
```

Out[10]:

	ID	price
0	1	8900
1	2	8800
2	3	4200
3	4	6000
4	5	5700
5	6	7900
6	7	10750
7	8	9190
8	9	5600
9	10	6000

In [12]:
```
data.groupby(['previous_owners']).count()
```

Out[12]:

	ID	model	engine_power	age_in_days	km	lat	lon	price
previous_owners								
1	1389	1389	1389	1389	1389	1389	1389	1389
2	117	117	117	117	117	117	117	117
3	23	23	23	23	23	23	23	23
4	9	9	9	9	9	9	9	9

In [18]:
```
data1=data.drop(['lat','ID'],axis=1)
print(data1)
```

```
       model  engine_power  age_in_days      km  previous_owners        lon  \
0     lounge            51          882   25000                1   8.611560   
1        pop            51         1186   32500                1  12.241890   
2      sport            74         4658  142228                1  11.417840   
3     lounge            51         2739  160000                1  17.634609   
4        pop            73         3074  106880                1  12.495650   
...      ...           ...          ...     ...              ...        ...   
1533   sport            51         3712  115280                1   7.704920   
1534  lounge            74         3835  112000                1   8.666870   
1535     pop            51         2223   60457                1   9.413480   
1536  lounge            51         2557   80750                1   7.682270   
1537     pop            51         1766   54276                1  17.568270   

      price  
0      8900  
1      8800  
2      4200  
3      6000  
4      5700  
...     ...  
1533   5200  
1534   4600  
1535   7500  
1536   5990  
1537   7900  

[1538 rows x 7 columns]
```

In [19]:
```
data2=data.drop('lon',axis=1)
print(data2)
```

```
        ID   model  engine_power  age_in_days      km  previous_owners  \
0        1  lounge            51          882   25000                1   
1        2     pop            51         1186   32500                1   
2        3   sport            74         4658  142228                1   
3        4  lounge            51         2739  160000                1   
4        5     pop            73         3074  106880                1   
...    ...     ...           ...          ...     ...              ...   
1533  1534   sport            51         3712  115280                1   
1534  1535  lounge            74         3835  112000                1   
1535  1536     pop            51         2223   60457                1   
1536  1537  lounge            51         2557   80750                1   
1537  1538     pop            51         1766   54276                1   

            lat  price  
0     44.907242   8900  
1     45.666359   8800  
2     45.503300   4200  
3     40.633171   6000  
4     41.903221   5700  
...         ...    ...  
1533  45.069679   5200  
1534  45.845692   4600  
1535  45.481541   7500  
1536  45.000702   5990  
1537  40.323410   7900  

[1538 rows x 8 columns]
```

In [17]:
```
data['price'].sum()
```

Out[17]:
```
13189894
```

In [20]:
```
data.iloc[0]
```

Out[20]:
```
ID                        1
model                lounge
engine_power             51
age_in_days             882
km                    25000
previous_owners           1
lat               44.907242
lon                 8.61156
price                  8900
Name: 0, dtype: object
```

In [35]:
```
data2=data.loc[(data.model=='lounge')&(data.previous_owners==1)]
data2
```

Out[35]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.611560	8900
3	4	lounge	51	2739	160000	1	40.633171	17.634609	6000
6	7	lounge	51	731	11600	1	44.907242	8.611560	10750
7	8	lounge	51	1521	49076	1	41.903221	12.495650	9190
11	12	lounge	51	366	17500	1	45.069679	7.704920	10990
...	...	...	...	...	...	...	...	...	...
1528	1529	lounge	51	2861	126000	1	43.841980	10.515310	5500
1529	1530	lounge	51	731	22551	1	38.122070	13.361120	9900
1530	1531	lounge	51	670	29000	1	45.764648	8.994500	10800
1534	1535	lounge	74	3835	112000	1	45.845692	8.666870	4600
1536	1537	lounge	51	2557	80750	1	45.000702	7.682270	5990

993 rows × 9 columns

In [36]:
```
data3=data[data['km']<30000]
```

```
In [34]: data3
```

```
Out[34]:
        ID   model  engine_power  age_in_days     km  previous_owners        lat       lon  price
   0     1  lounge            51          882  25000                1  44.907242   8.61156   8900
   6     7  lounge            51          731  11600                1  44.907242   8.61156  10750
  11    12  lounge            51          366  17500                1  45.069679   7.70492  10990
  12    13  lounge            51          456  18450                1  45.426571  11.78813   9700
  15    16  lounge            51         1096  28200                1  45.697208   9.84597   9500
 ...   ...     ...           ...          ...    ...              ...        ...       ...    ...
1522  1523  lounge            51          366  14618                1  45.707249  11.47760  10500
1526  1527  lounge            51         1705  23600                1  38.122070  13.36112   9300
1527  1528     pop            51          517   3000                1  40.748241  14.52835   9999
1529  1530  lounge            51          731  22551                1  38.122070  13.36112   9900
1530  1531  lounge            51          670  29000                1  45.764648   8.99450  10800

577 rows × 9 columns
```

In [58]:
```
data.sort_values(by='model')
```

Out[58]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	lounge	51	882	25000	1	44.907242	8.61156	8900
952	953	lounge	51	2009	35552	1	42.562832	12.64220	8900
951	952	lounge	51	3684	78000	1	43.552910	10.31998	6500
950	951	lounge	51	762	36463	1	41.107880	14.20881	10900
949	950	lounge	51	790	32000	1	41.572239	13.33369	9490
...	...	...	...	...	...	...	...	...	...
1057	1058	sport	51	3500	60000	2	45.438301	10.99170	6900
77	78	sport	51	2739	77149	3	44.754890	8.03190	7800
172	173	sport	51	4077	124000	1	41.152061	15.08309	4250
33	34	sport	51	3927	140000	2	40.755932	14.69019	5200
775	776	sport	51	2588	51000	1	45.536591	10.23204	7900

1538 rows × 9 columns

In [4]:
```
!pip3 install pymysql
```

```
Collecting pymysql
  Downloading PyMySQL-1.0.3-py3-none-any.whl (43 kB)
     ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 43.7/43.7 kB 285.3 kB/s eta 0:00:00MB/s eta 0:00:01
Installing collected packages: pymysql
Successfully installed pymysql-1.0.3
```

In [23]:
```
import pymysql
```

In [27]:

```
x=pymysql.connect(host='localhost',user='root',password='Password@123',database='shanmukh')
cr=x.cursor()
```

In [29]:

```
cr.execute('insert into data(id,name,no,dept)values(110,"ajdu",0000,00)')
```

Out[29]:

```
1
```

In [30]:

```
print('success')
x.commit()
x.close()
```

```
success
```

```
In [31]:
```

```
---------------------------------------------------------------------------
InterfaceError                            Traceback (most recent call last)
Cell In[31], line 1
----> 1 cr.execute('create table soldiers2(id int(5),name char(10),age int(5)')
      2 cr.execute('insert into soldiers2(id,name,age)values(1,"ramesh",30)')
      3 r.execute('insert into soldiers2(id,name,age)values(2,"suresh",32)')

File ~/anaconda3/lib/python3.10/site-packages/pymysql/cursors.py:158, in Cursor.execute(self, query, args)
    154     pass
    156 query = self.mogrify(query, args)
--> 158 result = self._query(query)
    159 self._executed = query
    160 return result

File ~/anaconda3/lib/python3.10/site-packages/pymysql/cursors.py:325, in Cursor._query(self, q)
    323 conn = self._get_db()
    324 self._clear_result()
--> 325 conn.query(q)
    326 self._do_get_result()
    327 return self.rowcount

File ~/anaconda3/lib/python3.10/site-packages/pymysql/connections.py:548, in Connection.query(self, sql, un
buffered)
    546 if isinstance(sql, str):
    547     sql = sql.encode(self.encoding, "surrogateescape")
--> 548 self._execute_command(COMMAND.COM_QUERY, sql)
    549 self._affected_rows = self._read_query_result(unbuffered=unbuffered)
    550 return self._affected_rows

File ~/anaconda3/lib/python3.10/site-packages/pymysql/connections.py:797, in Connection._execute_command(se
lf, command, sql)
    792 """
    793 :raise InterfaceError: If the connection is closed.
    794 :raise ValueError: If no username was specified.
    795 """
    796 if not self._sock:
--> 797     raise err.InterfaceError(0, "")
    799 # If the last query was unbuffered, make sure it finishes before
    800 # sending new commands
    801 if self._result is not None:

InterfaceError: (0, '')
```

```
In [ ]:
```