25%

50%

75%

385.250000

769.500000

1153.750000

max 1538.000000

51.000000

51.000000

51.000000

77.000000

670.000000

1035.000000

2616.000000

4658.000000

```
import pandas as pd
In [1]:
          import numpy as np
In [2]: data=pd.read_csv("/home/palcement/Desktop/test.txt")
In [3]: data.head()
Out[3]:
                                           branch marks
              srno
                             pincode
                                       city
                       name
                 1
                                                ΙT
                                                       89
           0
                        nikhil
                              534134
                                      attili
                 2 manikanta
                              534133 Attilil
                                              EEE
                                                       98
In [4]: data=pd.read_csv("/home/palcement/Downloads/fiat500.csv")
In [5]:
          data.describe()
Out[5]:
                          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
                   769.500000
                                 51.904421
                                           1650.980494
                                                         53396.011704
                                                                             1.123537
                                                                                        43.541361
                                                                                                    11.563428
                                                                                                               8576.003901
           mean
                                            1289.522278
                                                                                                     2.328190
             std
                   444.126671
                                  3.988023
                                                         40046.830723
                                                                             0.416423
                                                                                         2.133518
                                                                                                               1939.958641
             min
                    1.000000
                                 51.000000
                                             366.000000
                                                         1232.000000
                                                                             1.000000
                                                                                        36.855839
                                                                                                     7.245400
                                                                                                               2500.000000
```

1.000000

1.000000

1.000000

4.000000

41.802990

44.394096

45.467960

46.795612

9.505090

11.869260

12.769040

18.365520

7122.500000

9000.000000

10000.000000

11100.000000

localhost:8888/notebooks/fiat1.ipynb

20006.250000

39031.000000

79667.750000

235000.000000

In [6]: data.head(10)

Out[6]:

	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 [7]: data.tail(20)

Out[7]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
1518	1519	lounge	51	397	16053	1	38.122070	13.36112	10500
1519	1520	lounge	51	670	30000	1	45.764648	8.99450	10800
1520	1521	lounge	51	1035	15000	1	41.903221	12.49565	10990
1521	1522	lounge	51	3774	85000	1	44.294300	9.67444	4000
1522	1523	lounge	51	366	14618	1	45.707249	11.47760	10500
1523	1524	рор	51	2251	79800	1	45.512051	10.42701	6450
1524	1525	рор	51	2192	53300	1	40.609531	14.98093	7900
1525	1526	lounge	51	790	41870	1	45.707249	11.47760	9500
1526	1527	lounge	51	1705	23600	1	38.122070	13.36112	9300
1527	1528	pop	51	517	3000	1	40.748241	14.52835	9999
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	рор	51	1766	54276	1	40.323410	17.56827	7900

```
In [8]: |data['previous_owners'].unique()
 Out[8]: array([1, 2, 3, 4])
 In [9]: data["engine power"].unique()
 Out[9]: array([51, 74, 73, 62, 63, 66, 77, 58])
In [10]: list(data.columns)
Out[10]: ['ID',
           'model',
           'engine power',
           'age_in_days',
           'km',
           'previous_owners',
           'lat',
           'lon',
           'price']
In [11]: data.groupby(['previous_owners']).count()
Out[11]:
                           ID model engine_power age_in_days
                                                                  lat Ion price
                                                            km
           previous_owners
                      1 1389
                               1389
                                           1389
                                                      1389
                                                           1389 1389 1389
                                                                          1389
                       2
                          117
                                117
                                            117
                                                       117
                                                            117
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                                                                      117
                                                                           117
                                             23
                           23
                                 23
                                                        23
                                                             23
                                                                  23
                                                                       23
                                                                            23
                            9
                                  9
                                              9
                                                         9
                                                              9
                                                                   9
                                                                        9
                                                                             9
```

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

Out[12]:

	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
model								
lounge	1094	1094	1094	1094	1094	1094	1094	1094
pop	358	358	358	358	358	358	358	358
sport	86	86	86	86	86	86	86	86

In [13]: data1=data.drop(['lat','ID'],axis=1)

In [14]: data.head(5)

Out[14]:

	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	рор	73	3074	106880	1	41.903221	12.495650	5700

In [15]: data.head(5)

Out[15]:

	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	рор	73	3074	106880	1	41.903221	12.495650	5700

In [16]: data['price'].sum()

Out[16]: 13189894

In [17]: data2=data.loc[(data.model=='lounge')]
 data2

Out[17]:

	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

1094 rows × 9 columns

Out[18]:

ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
1	lounge	51	882	25000	1	44.907242	8.61156	8900
2	pop	51	1186	32500	1	45.666359	12.24189	8800
7	lounge	51	731	11600	1	44.907242	8.61156	10750
8	lounge	51	1521	49076	1	41.903221	12.49565	9190
11	pop	51	790	43286	1	40.871429	14.43896	8950
1526	lounge	51	790	41870	1	45.707249	11.47760	9500
1527	lounge	51	1705	23600	1	38.122070	13.36112	9300
1528	pop	51	517	3000	1	40.748241	14.52835	9999
1530	lounge	51	731	22551	1	38.122070	13.36112	9900
1531	lounge	51	670	29000	1	45.764648	8.99450	10800
	1 2 7 8 11 1526 1527 1528	1 lounge 2 pop 7 lounge 8 lounge 11 pop 1526 lounge 1527 lounge 1528 pop 1530 lounge	1 lounge 51 2 pop 51 7 lounge 51 8 lounge 51 11 pop 51 1526 lounge 51 1527 lounge 51 1528 pop 51 1530 lounge 51	1 lounge 51 882 2 pop 51 1186 7 lounge 51 731 8 lounge 51 1521 11 pop 51 790 1526 lounge 51 790 1527 lounge 51 1705 1528 pop 51 517 1530 lounge 51 731	1 lounge 51 882 25000 2 pop 51 1186 32500 7 lounge 51 731 11600 8 lounge 51 1521 49076 11 pop 51 790 43286 1526 lounge 51 790 41870 1527 lounge 51 1705 23600 1528 pop 51 517 3000 1530 lounge 51 731 22551	1 lounge 51 882 25000 1 2 pop 51 1186 32500 1 7 lounge 51 731 11600 1 8 lounge 51 1521 49076 1 11 pop 51 790 43286 1 1526 lounge 51 790 41870 1 1527 lounge 51 1705 23600 1 1528 pop 51 517 3000 1 1530 lounge 51 731 22551 1	1 lounge 51 882 25000 1 44.907242 2 pop 51 1186 32500 1 45.666359 7 lounge 51 731 11600 1 44.907242 8 lounge 51 1521 49076 1 41.903221 11 pop 51 790 43286 1 40.871429 1526 lounge 51 790 41870 1 45.707249 1527 lounge 51 1705 23600 1 38.122070 1528 pop 51 517 3000 1 40.748241 1530 lounge 51 731 22551 1 38.122070	1 lounge 51 882 25000 1 44.907242 8.61156 2 pop 51 1186 32500 1 45.666359 12.24189 7 lounge 51 731 11600 1 44.907242 8.61156 8 lounge 51 1521 49076 1 41.903221 12.49565 11 pop 51 790 43286 1 40.871429 14.43896

900 rows × 9 columns

Out[19]:

	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

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Out[20]:

	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
1533	1534	sport	51	3712	115280	1	45.069679	7.704920	5200
1534	1535	lounge	74	3835	112000	1	45.845692	8.666870	4600
1535	1536	pop	51	2223	60457	1	45.481541	9.413480	7500
1536	1537	lounge	51	2557	80750	1	45.000702	7.682270	5990
1537	1538	pop	51	1766	54276	1	40.323410	17.568270	7900

1420 rows × 9 columns

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Out[21]:

	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
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
1532	1533	pop	51	1917	52008	1	45.548000	11.549470	9900
1534	1535	lounge	74	3835	112000	1	45.845692	8.666870	4600
1535	1536	pop	51	2223	60457	1	45.481541	9.413480	7500
1536	1537	lounge	51	2557	80750	1	45.000702	7.682270	5990
1537	1538	pop	51	1766	54276	1	40.323410	17.568270	7900

1452 rows × 9 columns

In [22]: data5

Out[22]:

ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
1	lounge	51	882	25000	1	44.907242	8.611560	8900
2	pop	51	1186	32500	1	45.666359	12.241890	8800
4	lounge	51	2739	160000	1	40.633171	17.634609	6000
5	pop	73	3074	106880	1	41.903221	12.495650	5700
6	pop	74	3623	70225	1	45.000702	7.682270	7900
1533	pop	51	1917	52008	1	45.548000	11.549470	9900
1535	lounge	74	3835	112000	1	45.845692	8.666870	4600
1536	pop	51	2223	60457	1	45.481541	9.413480	7500
1537	lounge	51	2557	80750	1	45.000702	7.682270	5990
1538	pop	51	1766	54276	1	40.323410	17.568270	7900
	1 2 4 5 6 1533 1535 1536 1537	1 lounge 2 pop 4 lounge 5 pop 6 pop 1533 pop 1535 lounge 1536 pop	1 lounge 51 2 pop 51 4 lounge 51 5 pop 73 6 pop 74 1533 pop 51 1535 lounge 74 1536 pop 51 1537 lounge 51	1 lounge 51 882 2 pop 51 1186 4 lounge 51 2739 5 pop 73 3074 6 pop 74 3623 1533 pop 51 1917 1535 lounge 74 3835 1536 pop 51 2223 1537 lounge 51 2557	1 lounge 51 882 25000 2 pop 51 1186 32500 4 lounge 51 2739 160000 5 pop 73 3074 106880 6 pop 74 3623 70225 1533 pop 51 1917 52008 1535 lounge 74 3835 112000 1536 pop 51 2223 60457 1537 lounge 51 2557 80750	1 lounge 51 882 25000 1 2 pop 51 1186 32500 1 4 lounge 51 2739 160000 1 5 pop 73 3074 106880 1 6 pop 74 3623 70225 1 1533 pop 51 1917 52008 1 1535 lounge 74 3835 112000 1 1536 pop 51 2223 60457 1 1537 lounge 51 2557 80750 1	1 lounge 51 882 25000 1 44.907242 2 pop 51 1186 32500 1 45.666359 4 lounge 51 2739 160000 1 40.633171 5 pop 73 3074 106880 1 41.903221 6 pop 74 3623 70225 1 45.000702 1533 pop 51 1917 52008 1 45.548000 1535 lounge 74 3835 112000 1 45.845692 1536 pop 51 2223 60457 1 45.481541 1537 lounge 51 2557 80750 1 45.000702	1 lounge 51 882 25000 1 44.907242 8.611560 2 pop 51 1186 32500 1 45.666359 12.241890 4 lounge 51 2739 160000 1 40.633171 17.634609 5 pop 73 3074 106880 1 41.903221 12.495650 6 pop 74 3623 70225 1 45.000702 7.682270 1533 pop 51 1917 52008 1 45.548000 11.549470 1535 lounge 74 3835 112000 1 45.845692 8.666870 1536 pop 51 2223 60457 1 45.481541 9.413480 1537 lounge 51 2557 80750 1 45.000702 7.682270

1452 rows × 9 columns

In [23]: data6=data5.drop(['model'],axis=1)

In [24]: data6

Out[24]:

	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	51	882	25000	1	44.907242	8.611560	8900
1	2	51	1186	32500	1	45.666359	12.241890	8800
3	4	51	2739	160000	1	40.633171	17.634609	6000
4	5	73	3074	106880	1	41.903221	12.495650	5700
5	6	74	3623	70225	1	45.000702	7.682270	7900
1532	1533	51	1917	52008	1	45.548000	11.549470	9900
1534	1535	74	3835	112000	1	45.845692	8.666870	4600
1535	1536	51	2223	60457	1	45.481541	9.413480	7500
1536	1537	51	2557	80750	1	45.000702	7.682270	5990
1537	1538	51	1766	54276	1	40.323410	17.568270	7900

1452 rows × 8 columns

In [25]: cor=data6.corr()
cor

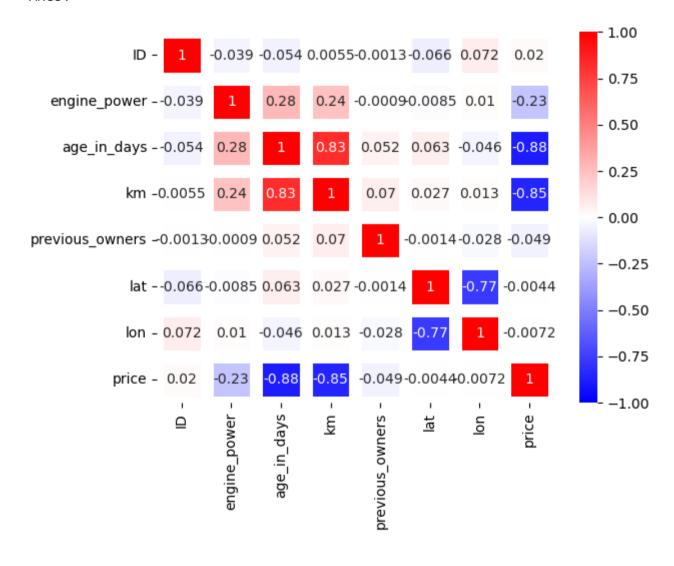
Out[25]:

	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
ID	1.000000	-0.039341	-0.054201	0.005451	-0.001301	-0.065945	0.072146	0.019708
engine_power	-0.039341	1.000000	0.276819	0.241078	-0.000898	-0.008490	0.010106	-0.227634
age_in_days	-0.054201	0.276819	1.000000	0.827986	0.051621	0.062516	-0.045983	-0.882877
km	0.005451	0.241078	0.827986	1.000000	0.069573	0.027303	0.013349	-0.853837
previous_owners	-0.001301	-0.000898	0.051621	0.069573	1.000000	-0.001401	-0.028420	-0.049060
lat	-0.065945	-0.008490	0.062516	0.027303	-0.001401	1.000000	-0.766403	-0.004442
lon	0.072146	0.010106	-0.045983	0.013349	-0.028420	-0.766403	1.000000	-0.007186
price	0.019708	-0.227634	-0.882877	-0.853837	-0.049060	-0.004442	-0.007186	1.000000

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Out[26]: <Axes: >



In []:	