In [1]: import pandas as pd
data=pd.read\_csv("/home/placement/Downloads/fiat500.csv")

In [2]: data.describe()

Out[2]:

	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
cou	nt 1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000	1538.000000
mea	n 769.500000	51.904421	1650.980494	53396.011704	1.123537	43.541361	11.563428	8576.003901
S	<b>d</b> 444.126671	3.988023	1289.522278	40046.830723	0.416423	2.133518	2.328190	1939.958641
m	n 1.000000	51.000000	366.000000	1232.000000	1.000000	36.855839	7.245400	2500.000000
25	<b>385.250000</b>	51.000000	670.000000	20006.250000	1.000000	41.802990	9.505090	7122.500000
50	<b>769.500000</b>	51.000000	1035.000000	39031.000000	1.000000	44.394096	11.869260	9000.000000
75	<b>6</b> 1153.750000	51.000000	2616.000000	79667.750000	1.000000	45.467960	12.769040	10000.000000
ma	x 1538.000000	77.000000	4658.000000	235000.000000	4.000000	46.795612	18.365520	11100.000000

## In [3]: data

## Out[3]:

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
3	sport	74	4658	142228	1	45.503300	11.417840	4200
4	lounge	51	2739	160000	1	40.633171	17.634609	6000
5	pop	73	3074	106880	1	41.903221	12.495650	5700
1534	sport	51	3712	115280	1	45.069679	7.704920	5200
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 3 4 5  1534 1535 1536	1 lounge 2 pop 3 sport 4 lounge 5 pop 1534 sport 1535 lounge 1536 pop 1537 lounge	1 lounge 51 2 pop 51 3 sport 74 4 lounge 51 5 pop 73 1534 sport 51 1535 lounge 74 1536 pop 51 1537 lounge 51	1 lounge 51 882 2 pop 51 1186 3 sport 74 4658 4 lounge 51 2739 5 pop 73 3074 1534 sport 51 3712 1535 lounge 74 3835 1536 pop 51 2223 1537 lounge 51 2557	1 lounge       51       882       25000         2 pop       51       1186       32500         3 sport       74       4658       142228         4 lounge       51       2739       160000         5 pop       73       3074       106880               1534 sport       51       3712       115280         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         3 sport       74       4658       142228       1         4 lounge       51       2739       160000       1         5 pop       73       3074       106880       1                1534       sport       51       3712       115280       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         3 sport       74       4658       142228       1       45.503300         4 lounge       51       2739       160000       1       40.633171         5 pop       73       3074       106880       1       41.903221                 1534       sport       51       3712       115280       1       45.069679         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         3 sport       74       4658       142228       1       45.503300       11.417840         4 lounge       51       2739       160000       1       40.633171       17.634609         5 pop       73       3074       106880       1       41.903221       12.495650                   1534       sport       51       3712       115280       1       45.069679       7.704920         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

1538 rows × 9 columns

'lon',
'price']

```
In [5]: data['model']=data['model'].map({'lounge':1,'pop':2,'sport':3})
```

In [6]: data

Out[6]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
0	1	1	51	882	25000	1	44.907242	8.611560	8900
1	2	2	51	1186	32500	1	45.666359	12.241890	8800
2	3	3	74	4658	142228	1	45.503300	11.417840	4200
3	4	1	51	2739	160000	1	40.633171	17.634609	6000
4	5	2	73	3074	106880	1	41.903221	12.495650	5700
1533	1534	3	51	3712	115280	1	45.069679	7.704920	5200
1534	1535	1	74	3835	112000	1	45.845692	8.666870	4600
1535	1536	2	51	2223	60457	1	45.481541	9.413480	7500
1536	1537	1	51	2557	80750	1	45.000702	7.682270	5990
1537	1538	2	51	1766	54276	1	40.323410	17.568270	7900

1538 rows × 9 columns

In [7]: cor=data.corr()

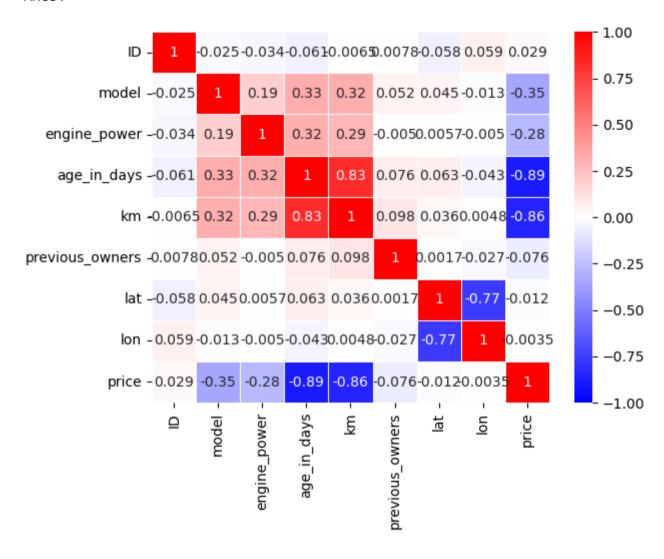
In [8]: cor

Out[8]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price
ID	1.000000	-0.024740	-0.034059	-0.060753	-0.006537	0.007803	-0.058207	0.058941	0.028516
model	-0.024740	1.000000	0.189906	0.326508	0.319580	0.052480	0.044901	-0.013200	-0.349885
engine_power	-0.034059	0.189906	1.000000	0.319190	0.285495	-0.005030	0.005721	-0.005032	-0.277235
age_in_days	-0.060753	0.326508	0.319190	1.000000	0.833890	0.075775	0.062982	-0.042667	-0.893328
km	-0.006537	0.319580	0.285495	0.833890	1.000000	0.097539	0.035519	0.004839	-0.859373
previous_owners	0.007803	0.052480	-0.005030	0.075775	0.097539	1.000000	0.001697	-0.026836	-0.076274
lat	-0.058207	0.044901	0.005721	0.062982	0.035519	0.001697	1.000000	-0.766646	-0.011733
lon	0.058941	-0.013200	-0.005032	-0.042667	0.004839	-0.026836	-0.766646	1.000000	-0.003541
price	0.028516	-0.349885	-0.277235	-0.893328	-0.859373	-0.076274	-0.011733	-0.003541	1.000000

```
In [9]: import seaborn as sns
sns.heatmap(cor,vmax=1,vmin=-1,annot=True,linewidths=.5,cmap='bwr')
```

Out[9]: <Axes: >



-	- 1	
In I	1 1 1	
	4.0	