In [20]:
```
import pandas as pd
import seaborn as sns
```

In [21]:
```
data=pd.read_csv("/home/placement/Desktop/yamuna/fiat500.csv")
```

In [22]:
```
data.describe()
```

Out[22]:
```
                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 [23]:
```
list(data)
```

Out[23]:
```
['ID',
 'model',
 'engine_power',
 'age_in_days',
 'km',
 'previous_owners',
 'lat',
 'lon',
 'price']
```

In [24]:

```
data.head(10)
```

Out[24]:

	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 [19]:
```
data['model']=data['model'].map({'lounge':1,'pop':2,'sport':3})
data
#data['model']=data['model'].map({'lounge':1,'pop':2,'sport':3})
#data
```

Out[19]:

	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 [26]:
```
cor=data.corr()
cor
```

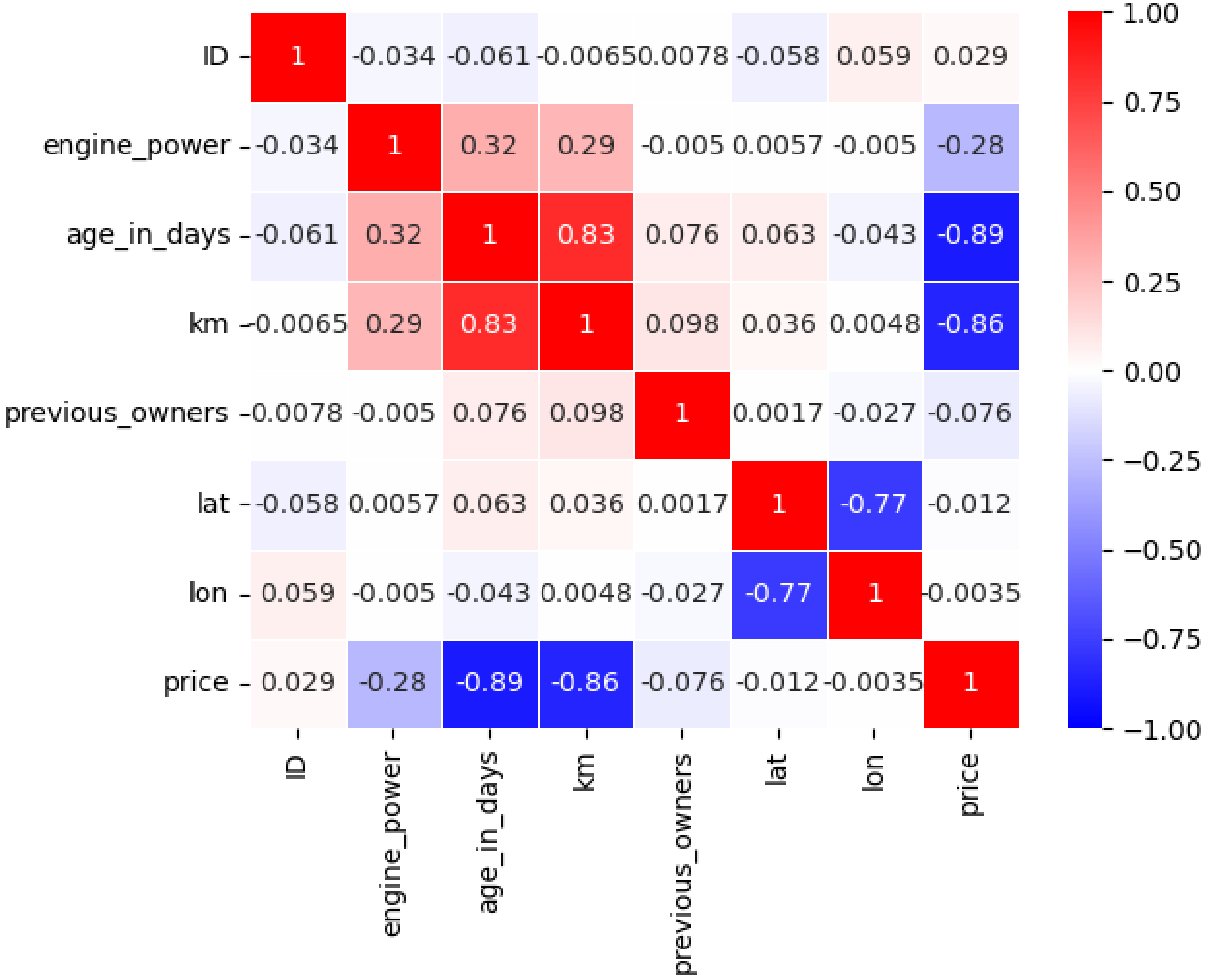
```
/tmp/ipykernel_5848/4173678507.py:1: FutureWarning: The default value of numeric_only in DataFrame.corr is
deprecated. In a future version, it will default to False. Select only valid columns or specify the value o
f numeric_only to silence this warning.
  cor=data.corr()
```

Out[26]:

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

```
In [31]: sns.heatmap(cor,vmax=1,vmin=-1,annot=True,linewidths=.5,cmap='bwr')

Out[31]: <Axes: >
```



	ID	engine_power	age_in_days	km	previous_owners	lat	lon	price
ID	1	-0.034	-0.061	-0.0065	0.0078	-0.058	0.059	0.029
engine_power	-0.034	1	0.32	0.29	-0.005	0.0057	-0.005	-0.28
age_in_days	-0.061	0.32	1	0.83	0.076	0.063	-0.043	-0.89
km	-0.0065	0.29	0.83	1	0.098	0.036	0.0048	-0.86
previous_owners	0.0078	-0.005	0.076	0.098	1	0.0017	-0.027	-0.076
lat	-0.058	0.0057	0.063	0.036	0.0017	1	-0.77	-0.012
lon	0.059	-0.005	-0.043	0.0048	-0.027	-0.77	1	-0.0035
price	0.029	-0.28	-0.89	-0.86	-0.076	-0.012	-0.0035	1

```
In [ ]:
```