In [3]:
```
import numpy as np
import pandas as pd
```

In [8]:
```
x=pd.read_csv(r"C:\Users\user\Downloads\fiat500_VehicleSelection_Dataset - fiat
x
```

Out[8]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	l
0	1.0	lounge	51.0	882.0	25000.0	1.0	44.907242	8.6115598
1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359	12.241889
2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300	11.417
3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171	17.634609
4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221	12.495650
...	...	...	...	...	...	...	...	
1544	NaN	NaN	NaN	NaN	NaN	NaN	NaN	leng
1545	NaN	NaN	NaN	NaN	NaN	NaN	NaN	conc
1546	NaN	NaN	NaN	NaN	NaN	NaN	NaN	Null valu
1547	NaN	NaN	NaN	NaN	NaN	NaN	NaN	fi
1548	NaN	NaN	NaN	NaN	NaN	NaN	NaN	sear

1549 rows × 11 columns

In [4]:
```
x.head(5)
```

Out[4]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	p
0	1.0	lounge	51.0	882.0	25000.0	1.0	44.907242	8.611559868	
1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359	12.24188995	
2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300	11.41784	
3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171	17.63460922	
4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221	12.49565029	

In [5]:
```
x.tail(5)
```

Out[5]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price	Un
1544	NaN	NaN	NaN	NaN	NaN	NaN	NaN	length	5	
1545	NaN	NaN	NaN	NaN	NaN	NaN	NaN	concat	lonprice	
1546	NaN	NaN	NaN	NaN	NaN	NaN	NaN	Null values	NO	
1547	NaN	NaN	NaN	NaN	NaN	NaN	NaN	find	1	
1548	NaN	NaN	NaN	NaN	NaN	NaN	NaN	search	1	

In [6]:
```
x.dtypes
```

Out[6]:
```
ID                 float64
model               object
engine_power       float64
age_in_days        float64
km                 float64
previous_owners    float64
lat                float64
lon                 object
price               object
Unnamed: 9         float64
Unnamed: 10         object
dtype: object
```

In [7]:
```
x.index
```

Out[7]:
```
RangeIndex(start=0, stop=1549, step=1)
```

In [8]:
```
x.describe()
```

Out[8]:

	ID	engine_power	age_in_days	km	previous_owners	lat	U
count	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	
std	444.126671	3.988023	1289.522278	40046.830723	0.416423	2.133518	
min	1.000000	51.000000	366.000000	1232.000000	1.000000	36.855839	
25%	385.250000	51.000000	670.000000	20006.250000	1.000000	41.802990	
50%	769.500000	51.000000	1035.000000	39031.000000	1.000000	44.394096	
75%	1153.750000	51.000000	2616.000000	79667.750000	1.000000	45.467960	
max	1538.000000	77.000000	4658.000000	235000.000000	4.000000	46.795612	

In [9]:
```
x["ID"]
```

Out[9]:
```
0       1.0
1       2.0
2       3.0
3       4.0
4       5.0
       ...
1544    NaN
1545    NaN
1546    NaN
1547    NaN
1548    NaN
Name: ID, Length: 1549, dtype: float64
```

In [10]:
```
x.loc[1:7]
```

Out[10]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon
1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359	12.24188995
2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300	11.41784
3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171	17.63460922
4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221	12.49565029
5	6.0	pop	74.0	3623.0	70225.0	1.0	45.000702	7.68227005
6	7.0	lounge	51.0	731.0	11600.0	1.0	44.907242	8.611559868
7	8.0	lounge	51.0	1521.0	49076.0	1.0	41.903221	12.49565029

In [11]:
```
x.isna()
```

Out[11]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price	Uni
0	False	False	False	False	False	False	False	False	False	
1	False	False	False	False	False	False	False	False	False	
2	False	False	False	False	False	False	False	False	False	
3	False	False	False	False	False	False	False	False	False	
4	False	False	False	False	False	False	False	False	False	
...	...	...	...	...	...	...	...	...	...	
1544	True	True	True	True	True	True	True	False	False	
1545	True	True	True	True	True	True	True	False	False	
1546	True	True	True	True	True	True	True	False	False	
1547	True	True	True	True	True	True	True	False	False	
1548	True	True	True	True	True	True	True	False	False	

1549 rows × 11 columns

In [12]:
```
x.fillna(value=100)
```

Out[12]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	
0	1.0	lounge	51.0	882.0	25000.0	1.0	44.907242	8.61155
1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359	12.2418
2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300	11.4
3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171	17.6346
4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221	12.4956
...	...	...	...	...	...	...	...	
1544	100.0	100	100.0	100.0	100.0	100.0	100.000000	le
1545	100.0	100	100.0	100.0	100.0	100.0	100.000000	cc
1546	100.0	100	100.0	100.0	100.0	100.0	100.000000	Null va
1547	100.0	100	100.0	100.0	100.0	100.0	100.000000	
1548	100.0	100	100.0	100.0	100.0	100.0	100.000000	se

1549 rows × 11 columns

In [13]:
```
x.dropna()
```

Out[13]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price	Unnamed: 9	Unna

In [14]:
```
x.columns
```

Out[14]:
```
Index(['ID', 'model', 'engine_power', 'age_in_days', 'km', 'previous_owners',
       'lat', 'lon', 'price', 'Unnamed: 9', 'Unnamed: 10'],
      dtype='object')
```

In [15]:
```
x["lon"]
```

Out[15]:
```
0       8.611559868
1       12.24188995
2          11.41784
3       17.63460922
4       12.49565029
              ...
1544         length
1545         concat
1546    Null values
1547           find
1548         search
Name: lon, Length: 1549, dtype: object
```

In [16]:
```
x.dropna(axis=1,how="any")
```

Out[16]:

	lon	price
0	8.611559868	8900
1	12.24188995	8800
2	11.41784	4200
3	17.63460922	6000
4	12.49565029	5700
...	...	...
1544	length	5
1545	concat	lonprice
1546	Null values	NO
1547	find	1
1548	search	1

1549 rows × 2 columns

In [10]:
```
x=x[["km","price"]]
```

In [13]:
```
x
```

Out[13]:

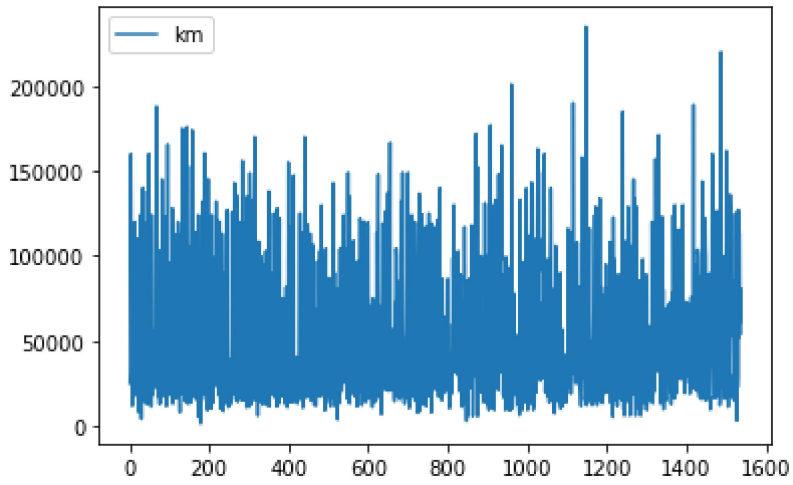
	km	price
0	25000.0	8900
1	32500.0	8800
2	142228.0	4200
3	160000.0	6000
4	106880.0	5700
...	...	...
1544	NaN	5
1545	NaN	lonprice
1546	NaN	NO
1547	NaN	1
1548	NaN	1

1549 rows × 2 columns

In [14]:
```
import matplotlib.pyplot as pp
```

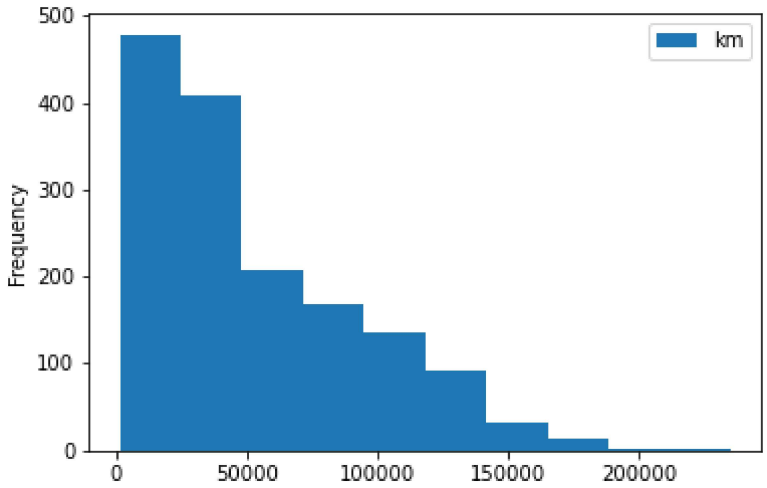
In [16]:
```
x.plot.line()
```

Out[16]: <AxesSubplot:>



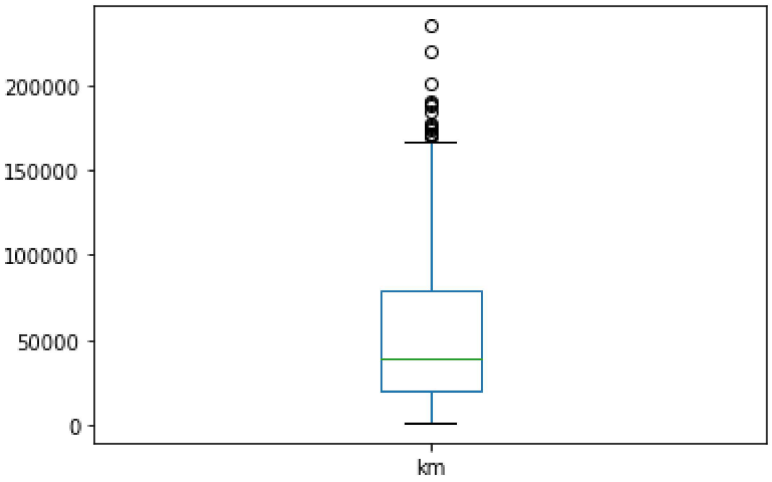
In [18]:
```
x.plot.hist()
```

Out[18]: <AxesSubplot:ylabel='Frequency'>



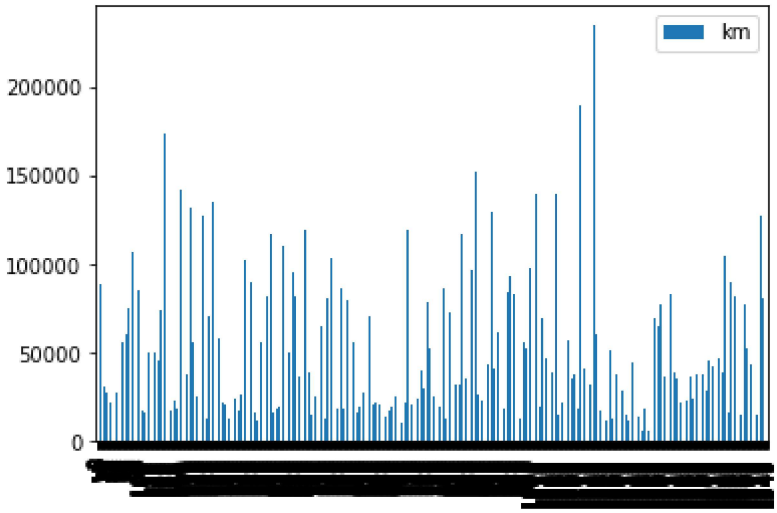
In [24]:
```
x.plot.box()
```

Out[24]: <AxesSubplot:>



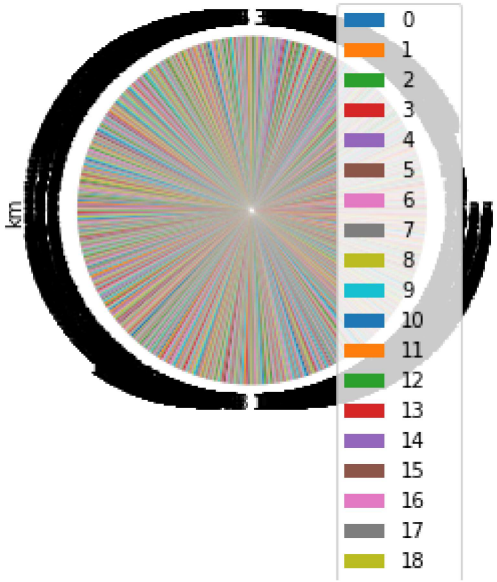
In [26]:
```
x.plot.bar()
```

Out[26]: <AxesSubplot:>



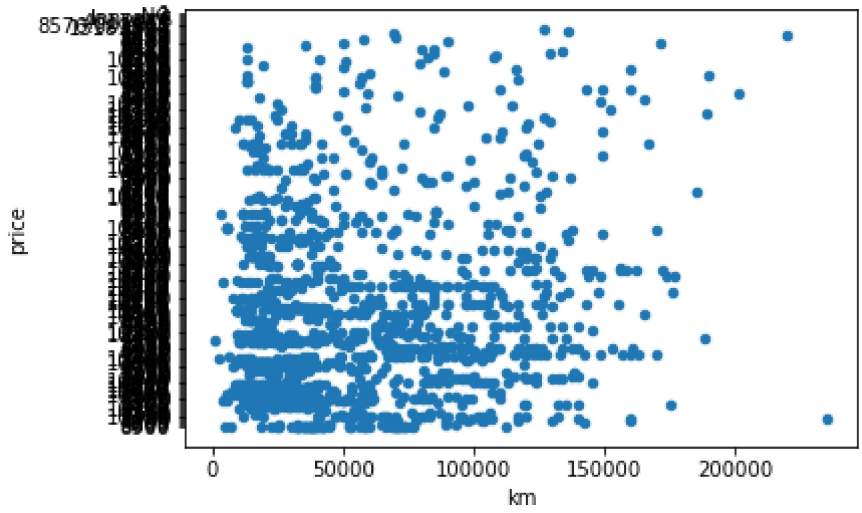
In [45]:
```
x.plot.pie(y='km')
```

Out[45]: <AxesSubplot:ylabel='km'>



In [44]:
```
x.plot.scatter(x='km',y='price')
```

Out[44]: <AxesSubplot:xlabel='km', ylabel='price'>



In [ ]:
```

```