

```
In [1]: import numpy as np
```

```
In [2]: import pandas as pd
```

```
In [10]: data=pd.read_csv(r"C:\Users\user\Downloads\fiat500_VehicleSelection_Dataset (1
data
```

Out[10]:

	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 8.611559
	1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359 12.24188
	2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300 11.41
	3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171 17.63460
	4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221 12.49565
	
	1544	NaN	NaN	NaN	NaN	NaN	NaN	len
	1545	NaN	NaN	NaN	NaN	NaN	NaN	cor
	1546	NaN	NaN	NaN	NaN	NaN	NaN	Null val
	1547	NaN	NaN	NaN	NaN	NaN	NaN	
	1548	NaN	NaN	NaN	NaN	NaN	NaN	sea

1549 rows × 11 columns

```
1.head
```

```
In [11]: data.head()
```

Out[11]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon
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 [25]: `2.tail`

File "<ipython-input-25-99642d7f1d9f>", line 1
`2.tail`
 ^
SyntaxError: invalid syntax

`data.tail()`

`3.describe`

In [14]: `data.describe()`

Out[14]:

	ID	engine_power	age_in_days	km	previous_owners	lat
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

`4.shape`

In [15]: `print(np.shape(data))`

`(1549, 11)`

`5.size`

In [28]: `print(np.size(data))`

`17039`

`6.find missing values`

In [18]: `print(data.isnull())`

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

	lon	price	Unnamed: 9	Unnamed: 10
0	False	False	True	True
1	False	False	True	True
2	False	False	True	True
3	False	False	True	True
4	False	False	True	True
...
1544	False	False	True	True
1545	False	False	True	True
1546	False	False	True	True
1547	False	False	True	True
1548	False	False	True	True

[1549 rows x 11 columns]

7.fill

```
In [20]: data.fillna(value=0)
```

Out[20]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon
0	1.0	lounge	51.0	882.0	25000.0	1.0	44.907242	8.61155986
1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359	12.2418895
2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300	11.4171
3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171	17.6346095
4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221	12.4956505
...
1544	0.0	0	0.0	0.0	0.0	0.0	0.000000	leng
1545	0.0	0	0.0	0.0	0.0	0.0	0.000000	conc
1546	0.0	0	0.0	0.0	0.0	0.0	0.000000	Null valu
1547	0.0	0	0.0	0.0	0.0	0.0	0.000000	fir
1548	0.0	0	0.0	0.0	0.0	0.0	0.000000	sear

1549 rows × 11 columns

```
8.drop
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```
In [23]: data.dropna()
```

Out[23]:

	ID	model	engine_power	age_in_days	km	previous_owners	lat	lon	price	Unnamed: 9	Unnamed: 10
0	1.0	lounge	51.0	882.0	25000.0	1.0	44.907242	8.61155986	120000.0	1	1
1	2.0	pop	51.0	1186.0	32500.0	1.0	45.666359	12.2418895	150000.0	1	1
2	3.0	sport	74.0	4658.0	142228.0	1.0	45.503300	11.4171	250000.0	1	1
3	4.0	lounge	51.0	2739.0	160000.0	1.0	40.633171	17.6346095	180000.0	1	1
4	5.0	pop	73.0	3074.0	106880.0	1.0	41.903221	12.4956505	140000.0	1	1
...
1544	0.0	0	0.0	0.0	0.0	0.0	0.000000	leng	120000.0	1	1
1545	0.0	0	0.0	0.0	0.0	0.0	0.000000	conc	150000.0	1	1
1546	0.0	0	0.0	0.0	0.0	0.0	0.000000	Null valu	180000.0	1	1
1547	0.0	0	0.0	0.0	0.0	0.0	0.000000	fir	140000.0	1	1
1548	0.0	0	0.0	0.0	0.0	0.0	0.000000	sear	120000.0	1	1

```
In [ ]:
```