In [3]:
```python
import nbconvert
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sbn
import warnings
warnings.filterwarnings("ignore")
```

Excel dosyamızı okutuyoruz

In [4]:
```python
dataFrame = pd.read_csv("merc.xlsx")
```

Verimiz hakkında bilgi edinmek için ilk 5 satır

In [5]:
```python
dataFrame.head()
```

Out[5]:

	model	year	price	transmission	mileage	fuelType	tax	mpg	engineSize
0	SLK	2005	5200	Automatic	63000	Petrol	325	32.1	1.8
1	S Class	2017	34948	Automatic	27000	Hybrid	20	61.4	2.1
2	SL CLASS	2016	49948	Automatic	6200	Petrol	555	28.0	5.5
3	G Class	2016	61948	Automatic	16000	Petrol	325	30.4	4.0
4	G Class	2016	73948	Automatic	4000	Petrol	325	30.1	4.0

Verimizin ortalamasını,standart sapmasını,in ve max gibi değerleri

In [19]:
```python
dataFrame.describe()
```

Out[19]:

	year	price	mileage	tax	mpg	engineSize
count	13119.000000	13119.000000	13119.000000	13119.000000	13119.000000	13119.000000
mean	2017.296288	24698.596920	21949.559037	129.972178	55.155843	2.071530
std	2.224709	11842.675542	21176.512267	65.260286	15.220082	0.572426
min	1970.000000	650.000000	1.000000	0.000000	1.100000	0.000000
25%	2016.000000	17450.000000	6097.500000	125.000000	45.600000	1.800000
50%	2018.000000	22480.000000	15189.000000	145.000000	56.500000	2.000000
75%	2019.000000	28980.000000	31779.500000	145.000000	64.200000	2.100000
max	2020.000000	159999.000000	259000.000000	580.000000	217.300000	6.200000

Kullanıcıların tercih ettiği vites tipine bakıyoruz

In [194…
```python
sbn.countplot(dataFrame["transmission"])
```

```
plt.show()
```
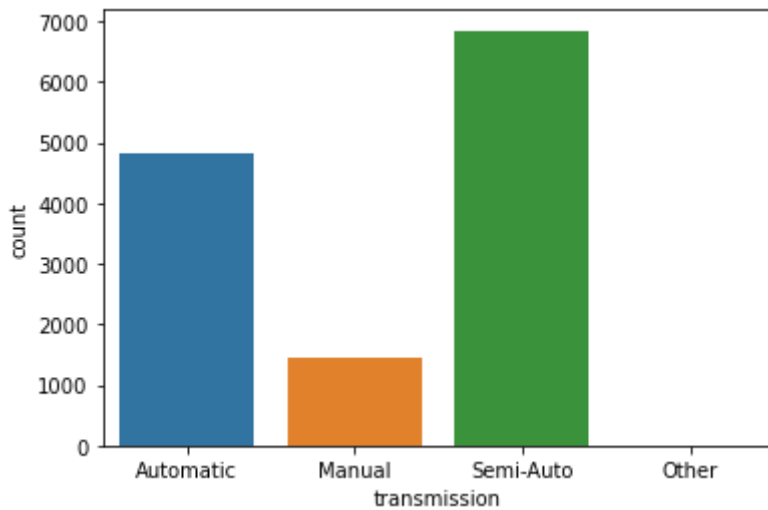

Her modelden kaç adet alındığın

In [9]:
```
print(dataFrame["model"].value_counts())
print("-------------------------------------------")
print(dataFrame["model"].value_counts() / len(dataFrame))
sbn.countplot( y = dataFrame["model"])
plt.show()
```

```
 C Class       3747
 A Class       2561
 E Class       1953
 GLC Class      960
 GLA Class      847
 B Class        591
 CL Class       511
 GLE Class      461
 SL CLASS       260
 CLS Class      237
 V Class        207
 S Class        197
 GL Class       121
 SLK            95
 CLA Class      86
 X-CLASS        82
 M Class        79
 GLS Class      74
 GLB Class      19
 G Class        15
 CLK             7
 CLC Class       3
 R Class         2
180              1
230              1
220              1
200              1
Name: model, dtype: int64
-------------------------------------------
 C Class       0.285616
 A Class       0.195213
 E Class       0.148868
 GLC Class     0.073176
 GLA Class     0.064563
 B Class       0.045049
```

```
CL Class       0.038951
GLE Class      0.035140
SL CLASS       0.019819
CLS Class      0.018065
V Class        0.015779
S Class        0.015016
GL Class       0.009223
SLK            0.007241
CLA Class      0.006555
X-CLASS        0.006250
M Class        0.006022
GLS Class      0.005641
GLB Class      0.001448
G Class        0.001143
CLK            0.000534
CLC Class      0.000229
R Class        0.000152
180            0.000076
230            0.000076
220            0.000076
200            0.000076
Name: model, dtype: float64
```
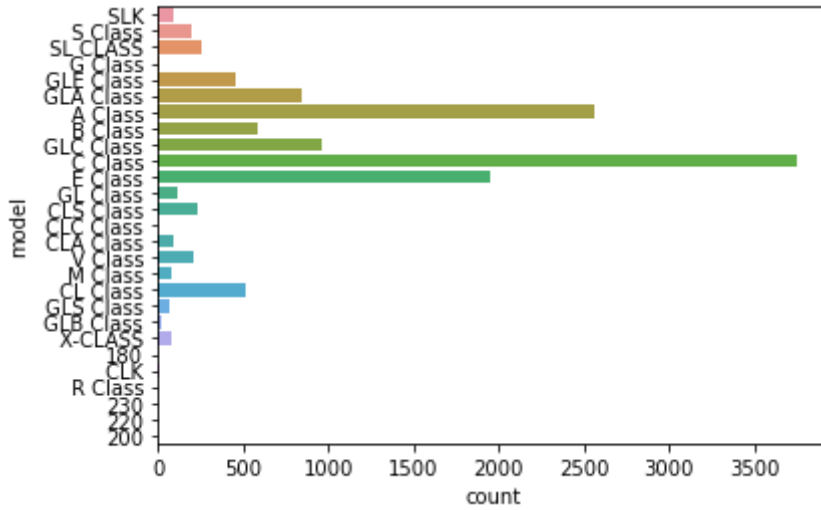

Modele göre mile başına yakıt tüketim

```python
sbn.barplot(dataFrame["mpg"],dataFrame["model"])
plt.show()
```
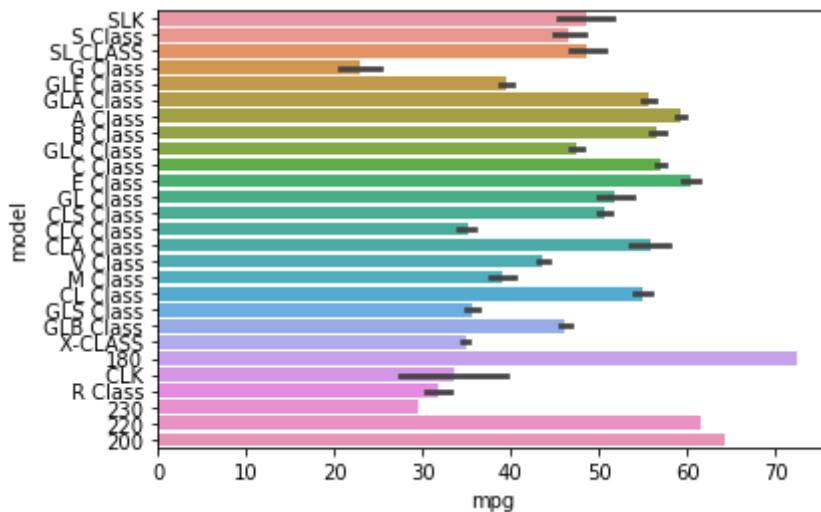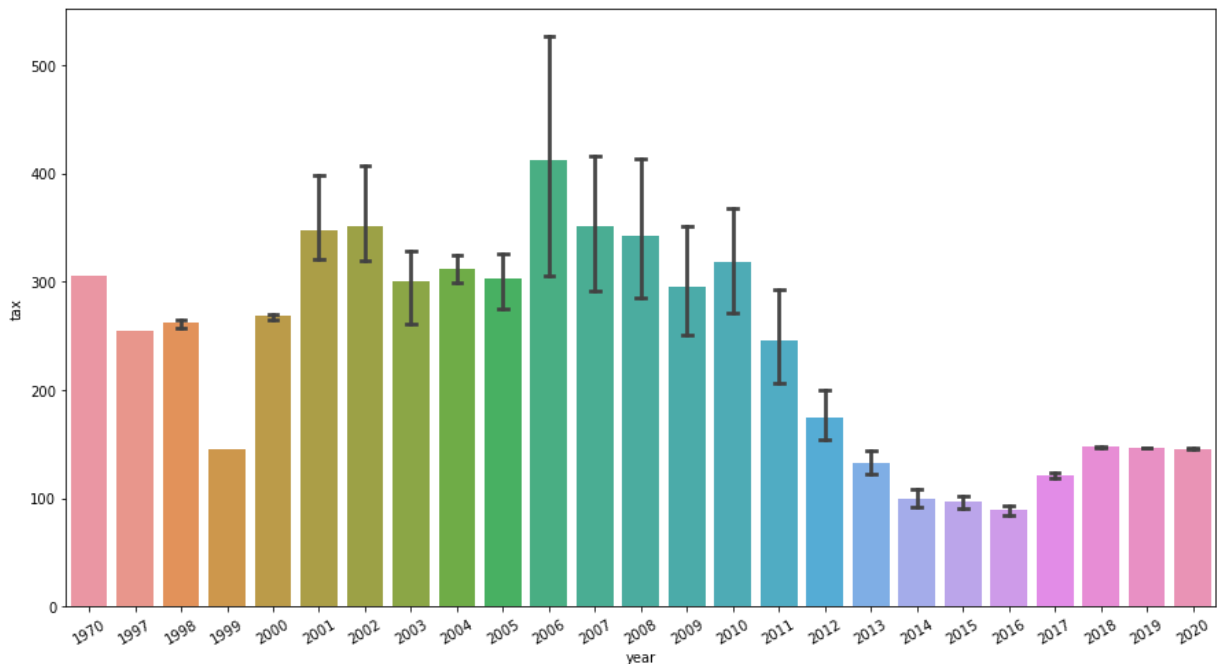
Yıla göre yakıt tüketimini

In [7]:
```python
plt.figure(figsize = (15,8))
ax = sbn.barplot(x = dataFrame["year"],y = dataFrame["mpg"], capsize=.2)
ax.set_xticklabels(ax.get_xticklabels(),rotation = 30)
plt.show()
```
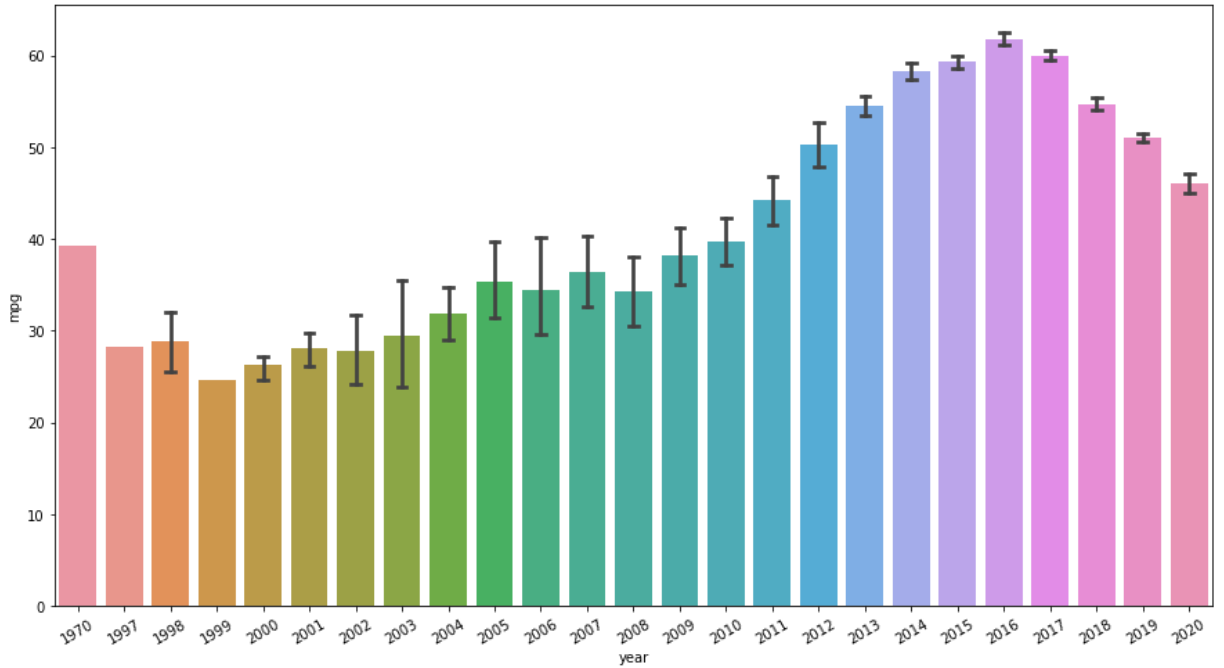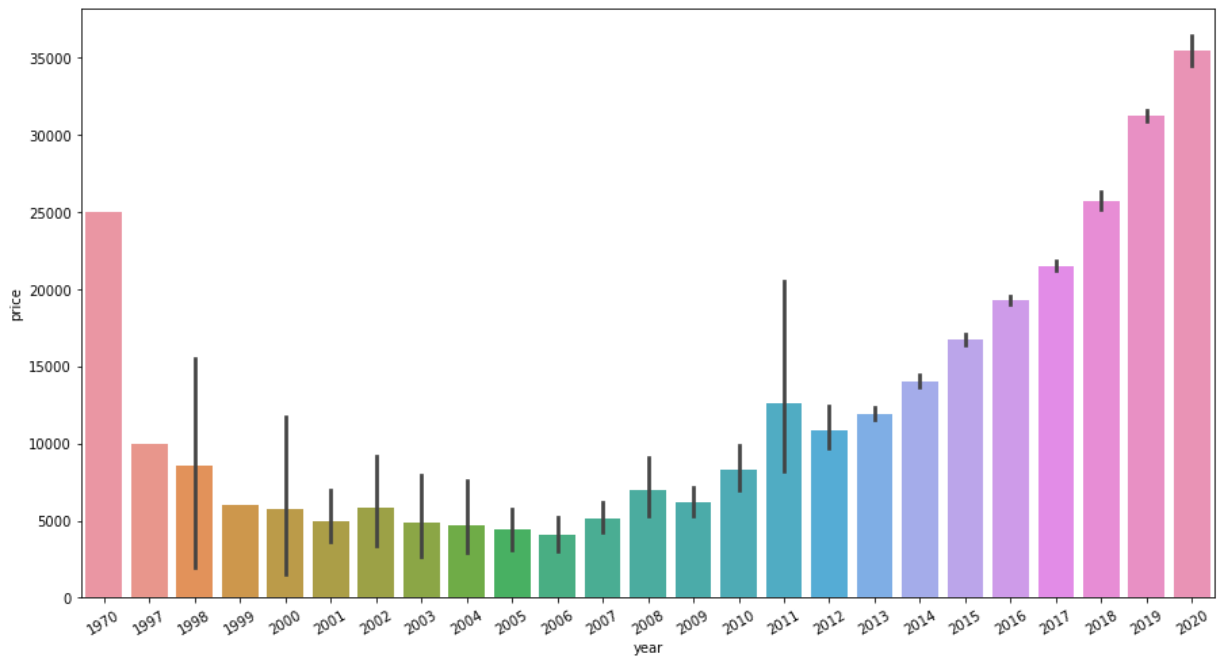

Yıla göre ödenen ortalama vergi

In [10]:
```python
plt.figure(figsize=(15,8))
ax = sbn.barplot(x = dataFrame["year"], y = dataFrame["tax"], capsize = .2)
ax.set_xticklabels(ax.get_xticklabels(),rotation=30)
plt.show()
```


Yıla göre ortalama fiyat

In [6]:
```python
plt.figure(figsize = (15,8))
ax = sbn.barplot(dataFrame["year"],dataFrame["price"])
ax.set_xticklabels(ax.get_xticklabels(),rotation=30)
plt.show()
```


Yapılan kilometerye göre araç fiyatı

In [197…
```python
plt.figure(figsize = (15,8))
sbn.scatterplot(dataFrame["mileage"],dataFrame["price"])
```
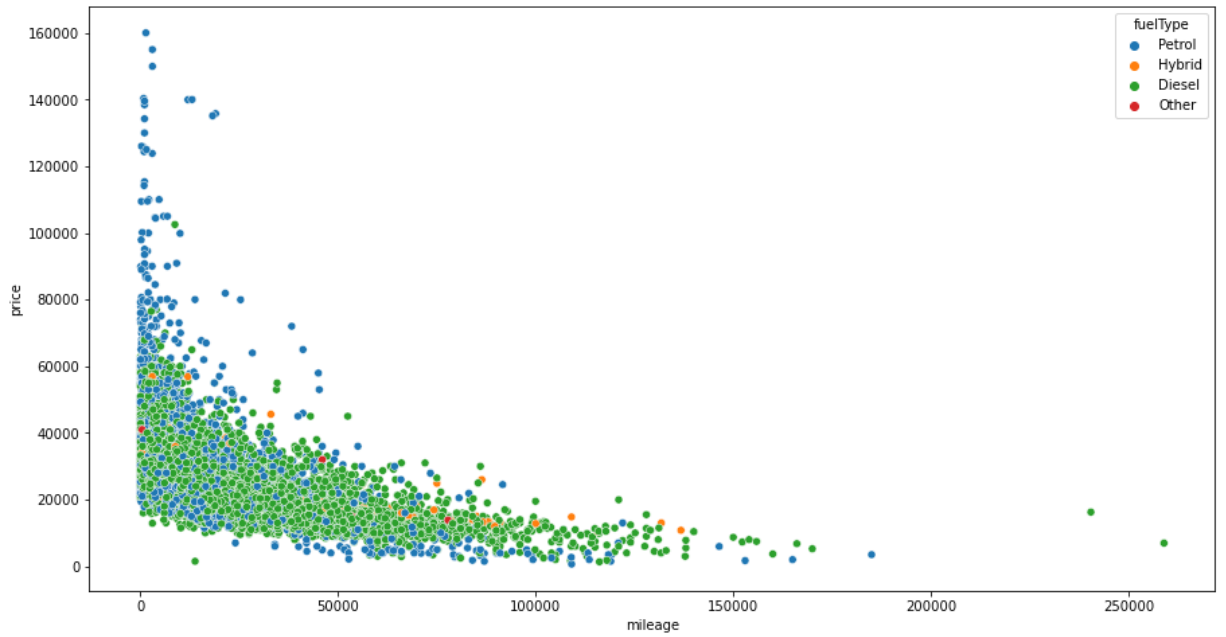
Out[197…
```
<AxesSubplot:xlabel='mileage', ylabel='price'>
```
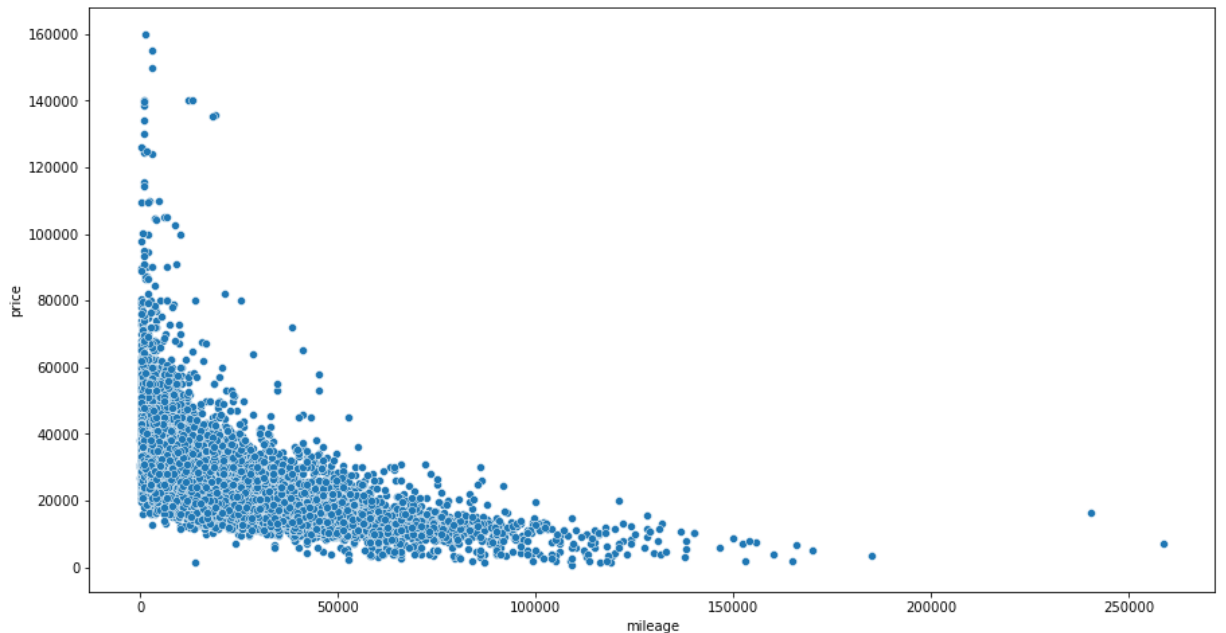

Yapılan kilometerye göre araç fiyatı - yakıt türüne göre gösterim

In [198…
```python
plt.figure(figsize = (15,8))
sbn.scatterplot(dataFrame["mileage"],dataFrame["price"],hue=dataFrame["fuelType"])
```

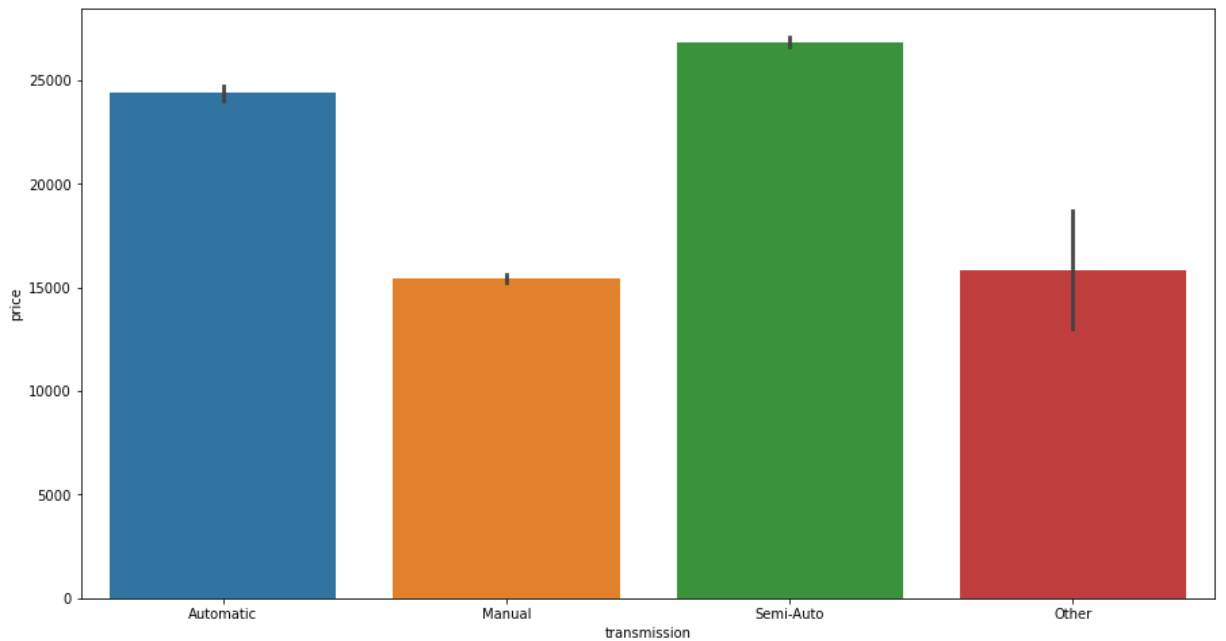Out[198...   `<AxesSubplot:xlabel='mileage', ylabel='price'>`

Vites türüne göre fiyat aralığı

In [199...

```python
plt.figure(figsize = (15,8))
sbn.barplot(dataFrame["transmission"],dataFrame["price"])
```

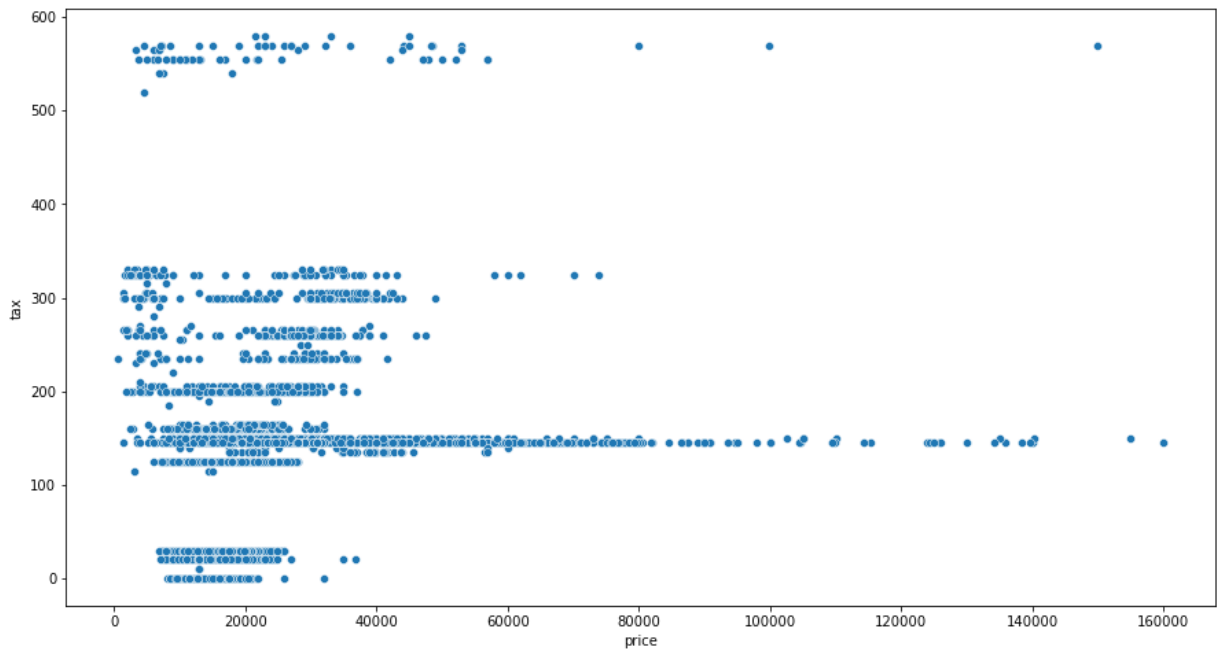Out[199...   `<AxesSubplot:xlabel='transmission', ylabel='price'>`
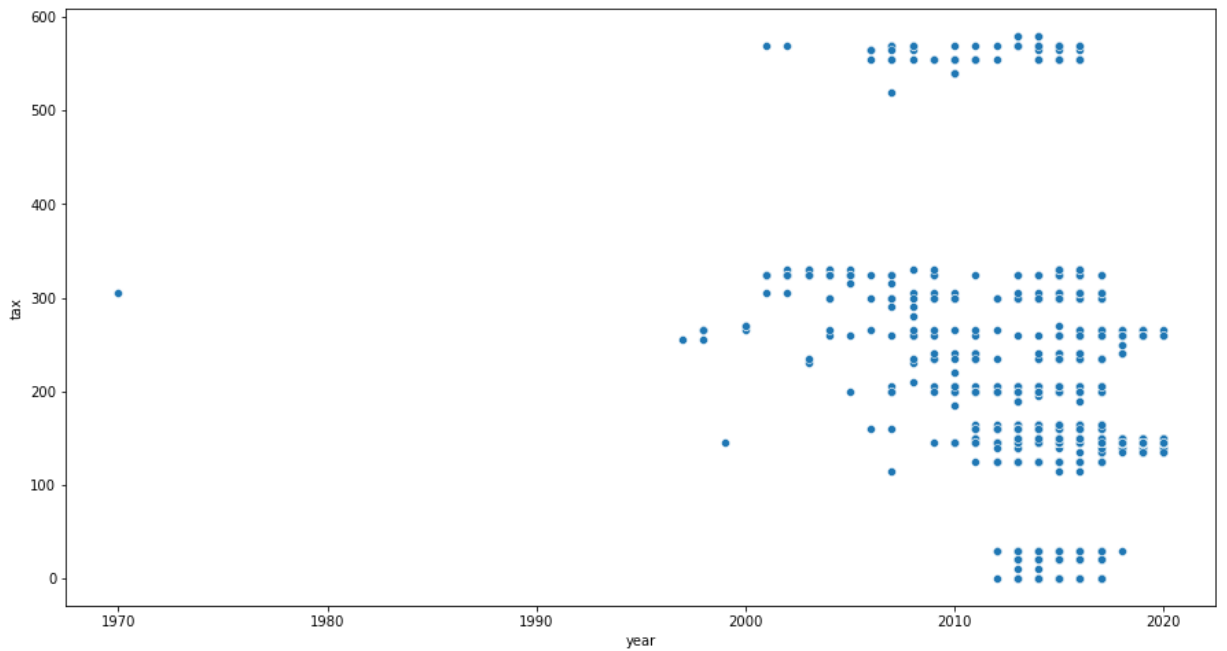

Araç fiyatına göre vergi tutarı

In [165...

```python
plt.figure(figsize = (15,8))
ax = sbn.scatterplot(x = dataFrame["price"],y = dataFrame["tax"])
plt.show()
```

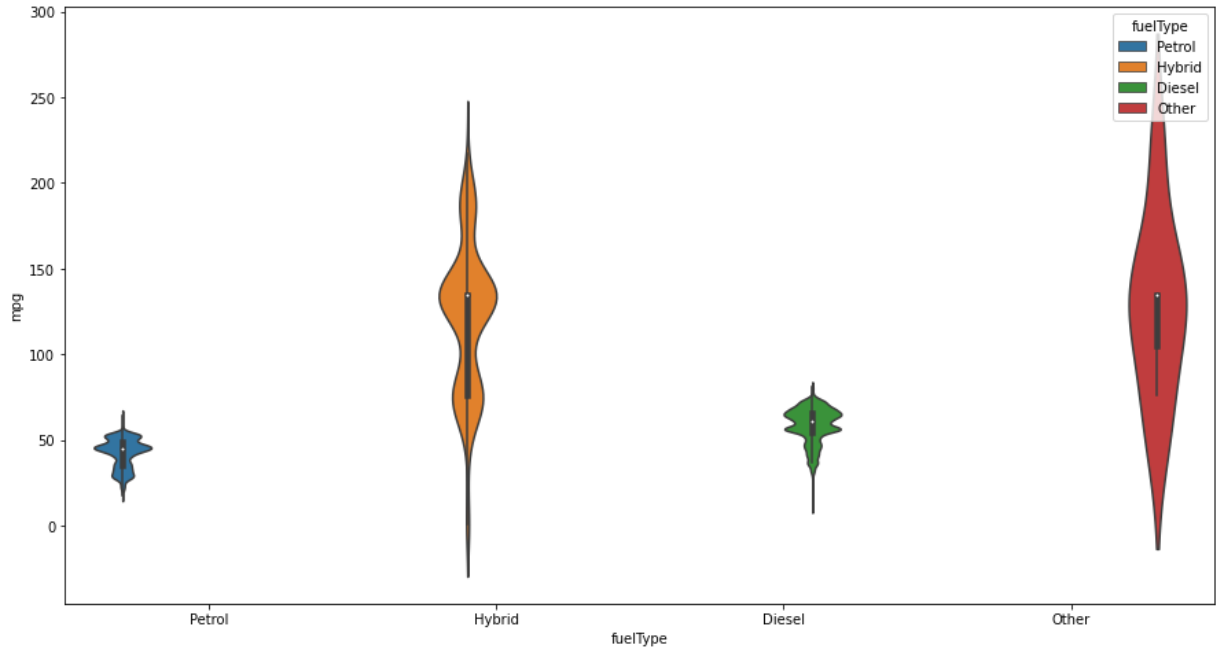## Yıla göre vargi tutarı

```
In [166...
plt.figure(figsize = (15,8))
ax = sbn.scatterplot(x = dataFrame["year"],y = dataFrame["tax"])
plt.show()
```


Yakıt türüne göre mile başına yakıt tüketimi

```
In [200...
plt.figure(figsize = (15,8))
sbn.violinplot(dataFrame["fuelType"],dataFrame["mpg"],hue=dataFrame["fuelType"])
plt.show()
```
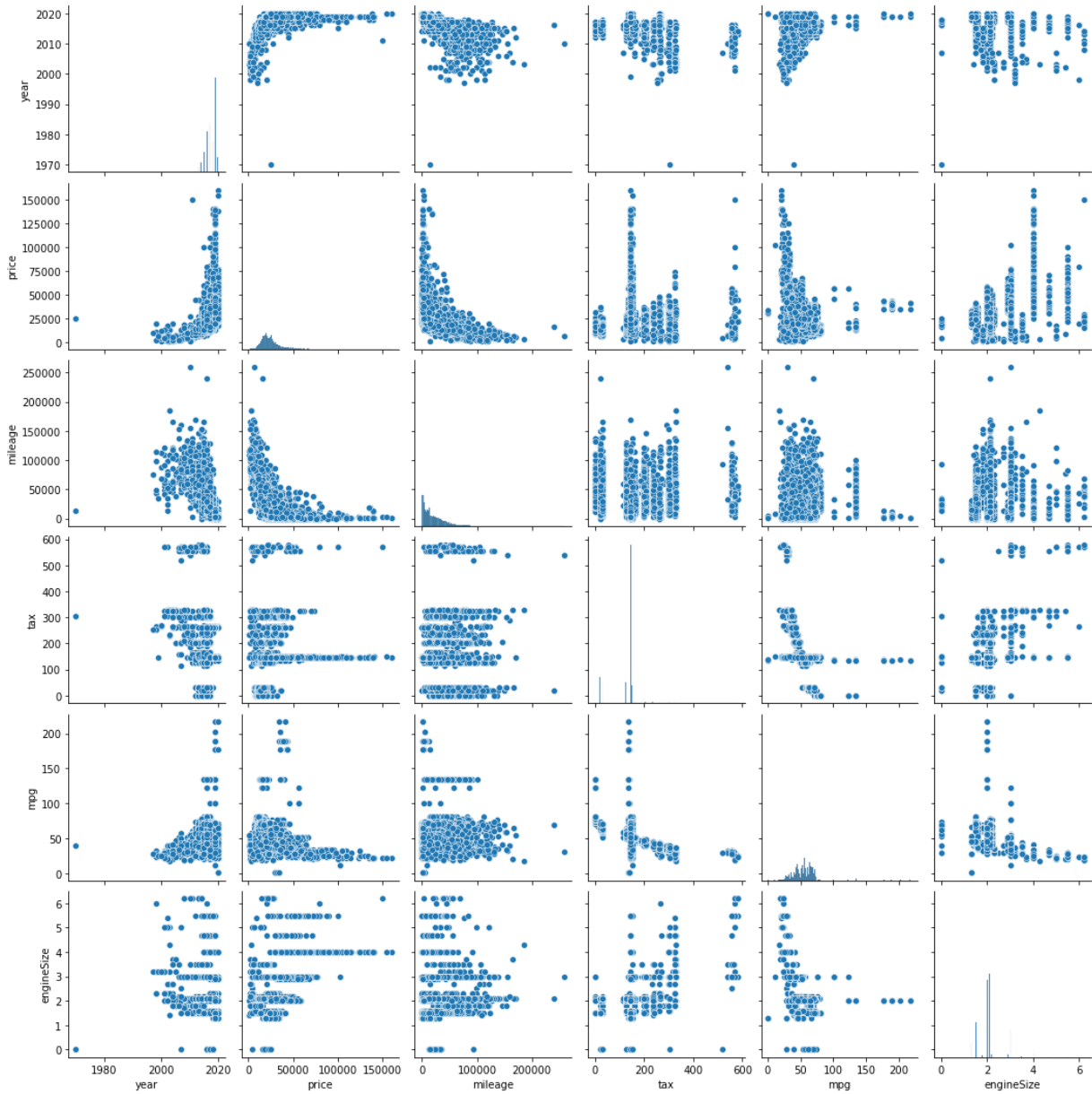
Tüm değerleri birbiri ile olan ilşkisi

```
In [189... sbn.pairplot(dataFrame)
```

```
Out[189... <seaborn.axisgrid.PairGrid at 0x257171f4340>
```

In [ ]:

In [ ]: