In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
```

In [2]:
```
cars=pd.read_excel(r"C:\Users\Jan Saida\OneDrive\Documents\Copy of 1.Categorical-variables.Visualization-techni
```

In [3]:
```
cars
```

Out[3]:

	Unnamed: 0	Graphs and tables for categorical variables	Unnamed: 2
0	NaN	German car shop	NaN
1	NaN	NaN	NaN
2	NaN	NaN	Frequency
3	NaN	Audi	124
4	NaN	BMW	98
5	NaN	Mercedes	113
6	NaN	Total	335

In [4]:
```
cars.isnull().sum()
```

Out[4]:
```
Unnamed: 0                                  7
Graphs and tables for categorical variables    2
Unnamed: 2                                  2
dtype: int64
```

In [5]:
```
data={'Audi':124,'BMW':98,'Mercedes':113}
```

In [6]:
```
data
```

Out[6]:
```
{'Audi': 124, 'BMW': 98, 'Mercedes': 113}
```

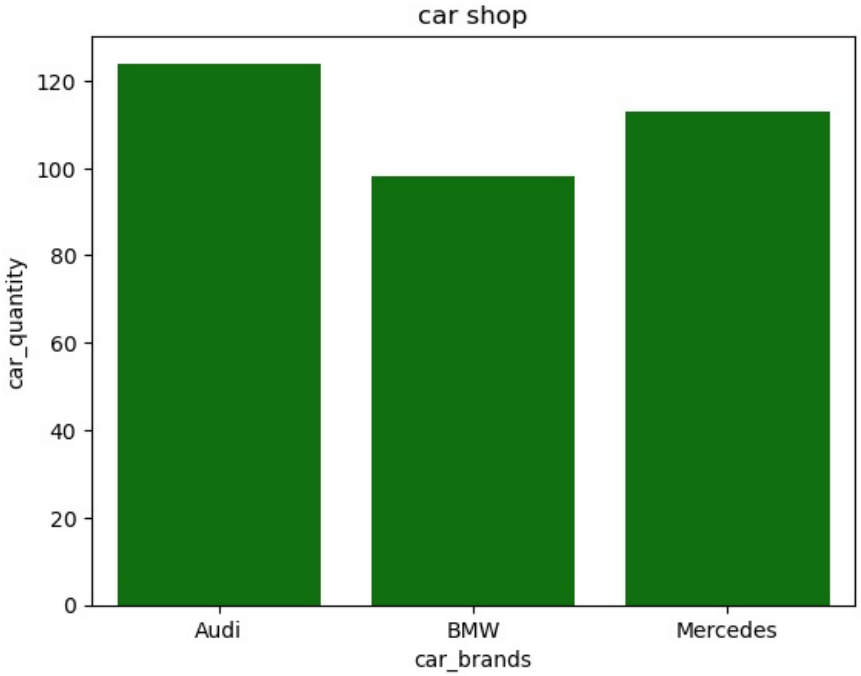
In [7]:
```
import warnings
warnings.filterwarnings('ignore')
```

In [8]:
```
cars.car_brands=['Audi','BMW','Mercedes']
```

In [9]:
```
cars.car_quantity=[124,98,113]
```

In [10]:
```
sns.barplot(data,color='green')
plt.xlabel('car_brands')
plt.ylabel('car_quantity')
plt.title('car shop')
```

Out[10]:
```
Text(0.5, 1.0, 'car shop')
```



In [11]:
```
data={'car_brands':['Audi','BMW','Mercedes'],'car_quantity':[124,98,113]}
```

```
data
```

Out[11]:
```
{'car_brands': ['Audi', 'BMW', 'Mercedes'], 'car_quantity': [124, 98, 113]}
```

In [12]:
```
shop=pd.DataFrame(data)
```

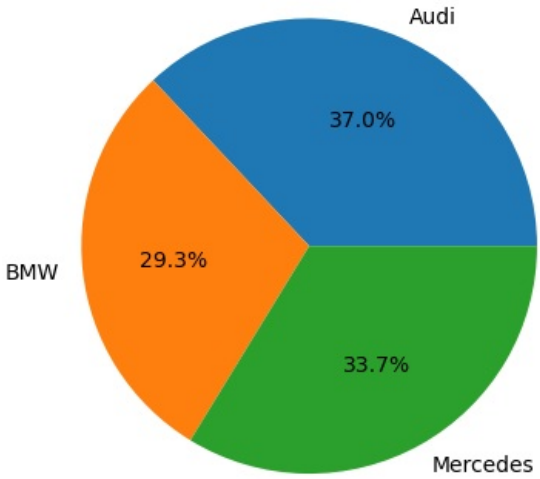
In [13]:
```
shop
```

Out[13]:

	car_brands	car_quantity
0	Audi	124
1	BMW	98
2	Mercedes	113

In [14]:
```
plt.pie(shop['car_quantity'],labels=shop['car_brands'],autopct='%1.1f%%')
```

Out[14]:
```
([<matplotlib.patches.Wedge at 0x141684df8c0>,
  <matplotlib.patches.Wedge at 0x141681f6300>,
  <matplotlib.patches.Wedge at 0x141681f47d0>],
 [Text(0.4363892652732461, 1.0097348212051898, 'Audi'),
  Text(-1.0941524656294324, -0.1132712759574722, 'BMW'),
  Text(0.5380457655904913, -0.9594304321471891, 'Mercedes')],
 [Text(0.23803050833086148, 0.5507644479301035, '37.0%'),
  Text(-0.5968104357978722, -0.061784332340439375, '29.3%'),
  Text(0.2934795085039043, -0.5233256902621032, '33.7%')])
```



In [ ]:
```

```