```
Chapter 4 - Practical Data Visualization
Segment 6- Creating Statistical Data Graphics
```

In [1]:
```python
import numpy as np
import pandas as pd
from pandas import Series, DataFrame

from pandas.plotting import scatter_matrix

import matplotlib.pyplot as plt
from pylab import rcParams
```

In [2]:
```python
%matplotlib inline
rcParams['figure.figsize'] = 5, 4
```

In [3]:
```python
import seaborn as sb
sb.set_style('whitegrid')
```

```
Eyeballing dataset distributions with histograms
```

In [5]:
```python
address = 'C:/Users/danal/Desktop/ExerciseFiles/Data/mtcars.csv'

cars = pd.read_csv(address)
cars.columns = ['car_names', 'mpg', 'cyl', 'disp', 'hp', 'drat', 'wt', 'qsec', '\

cars.index = cars.car_names

mpg = cars['mpg']

mpg.plot(kind='hist')
```
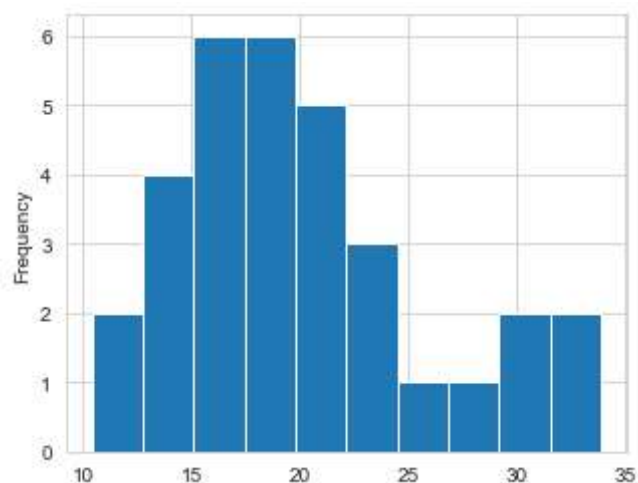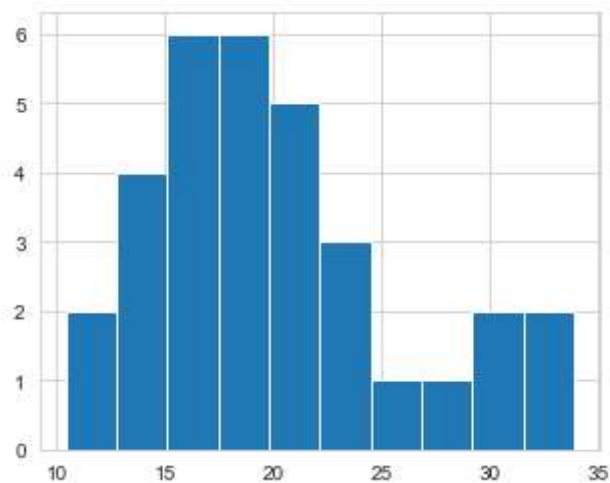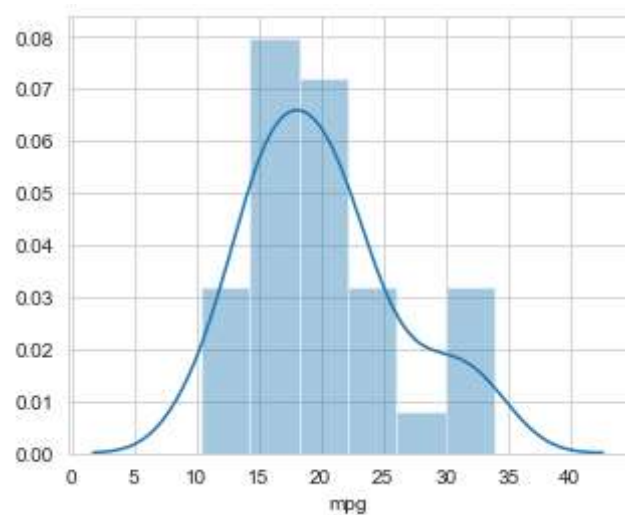
Out[5]: <matplotlib.axes._subplots.AxesSubplot at 0x24945fb7388>

In [6]:
```python
plt.hist(mpg)
plt.plot()
```
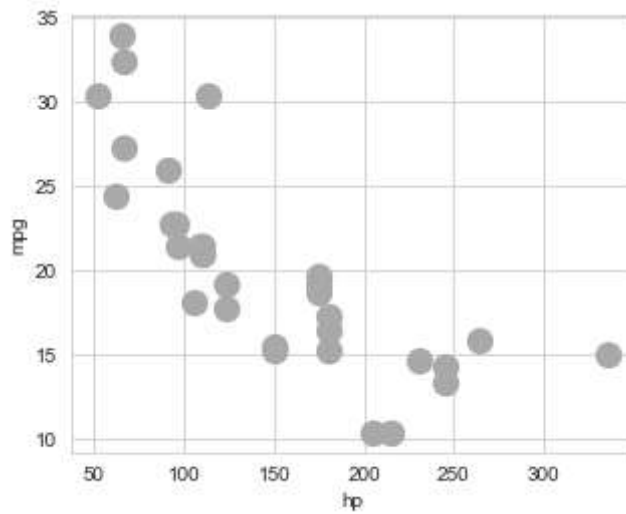
Out[6]: []

In [8]:
```python
sb.distplot(mpg)
```

Out[8]: <matplotlib.axes._subplots.AxesSubplot at 0x24945f9adc8>
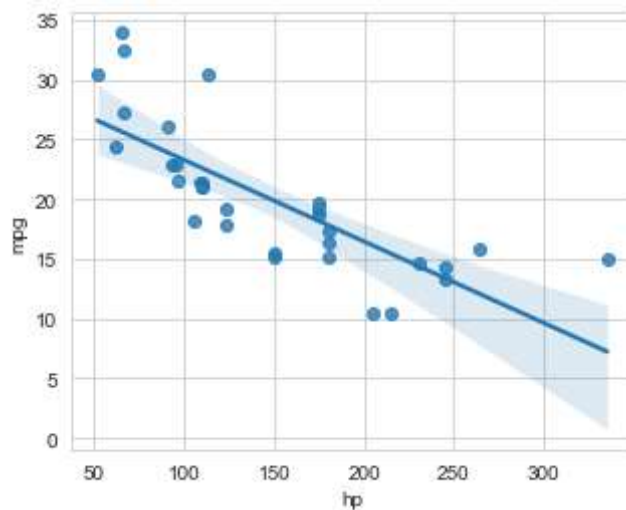

Seeing scatterplots in action

In [9]:
```python
cars.plot(kind='scatter', x='hp', y='mpg', c=['darkgray'], s=150)
```

Out[9]: <matplotlib.axes._subplots.AxesSubplot at 0x24944d3b588>

In [11]:
```python
sb.regplot(x='hp', y='mpg', data=cars, scatter=True)
```
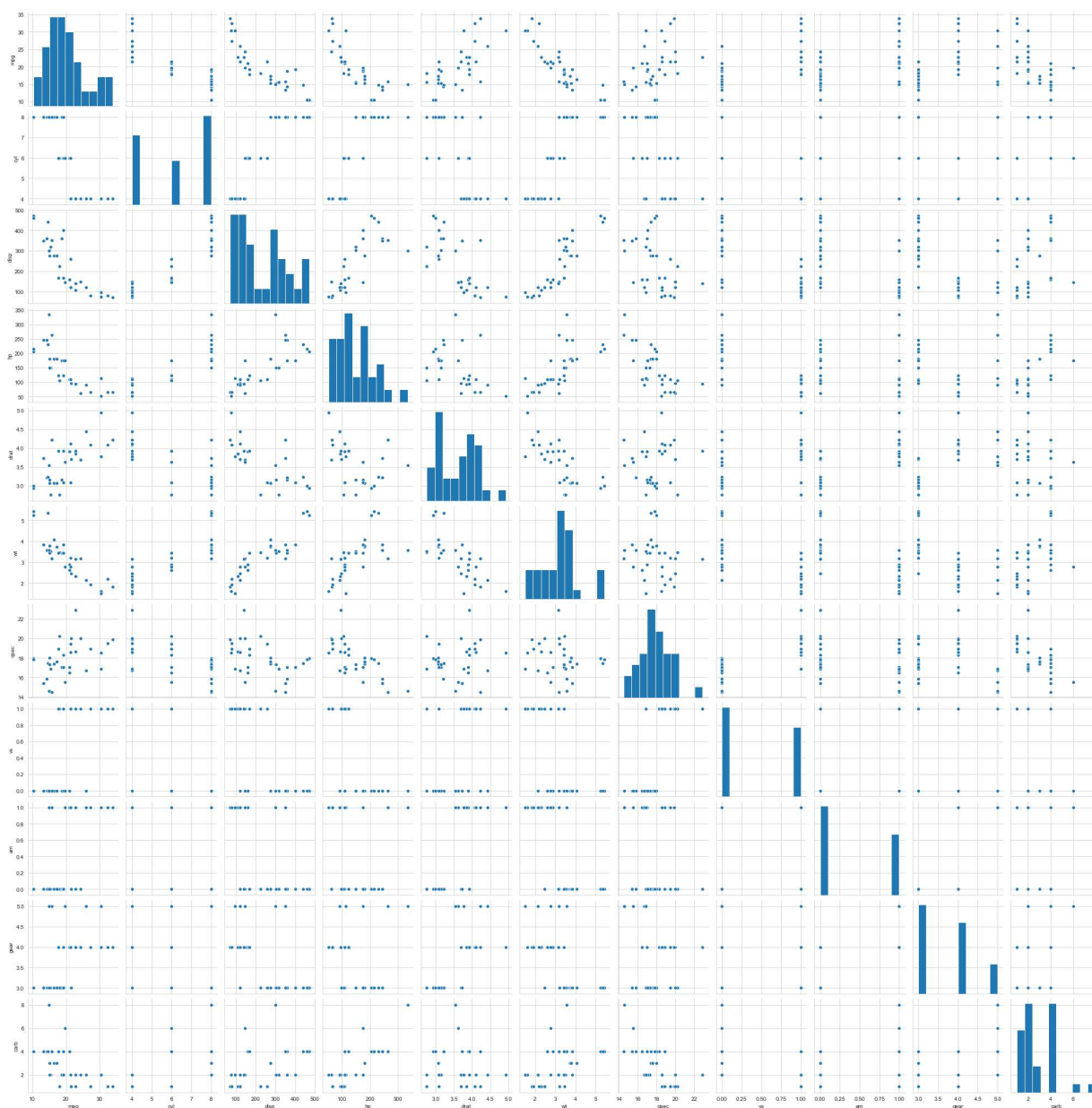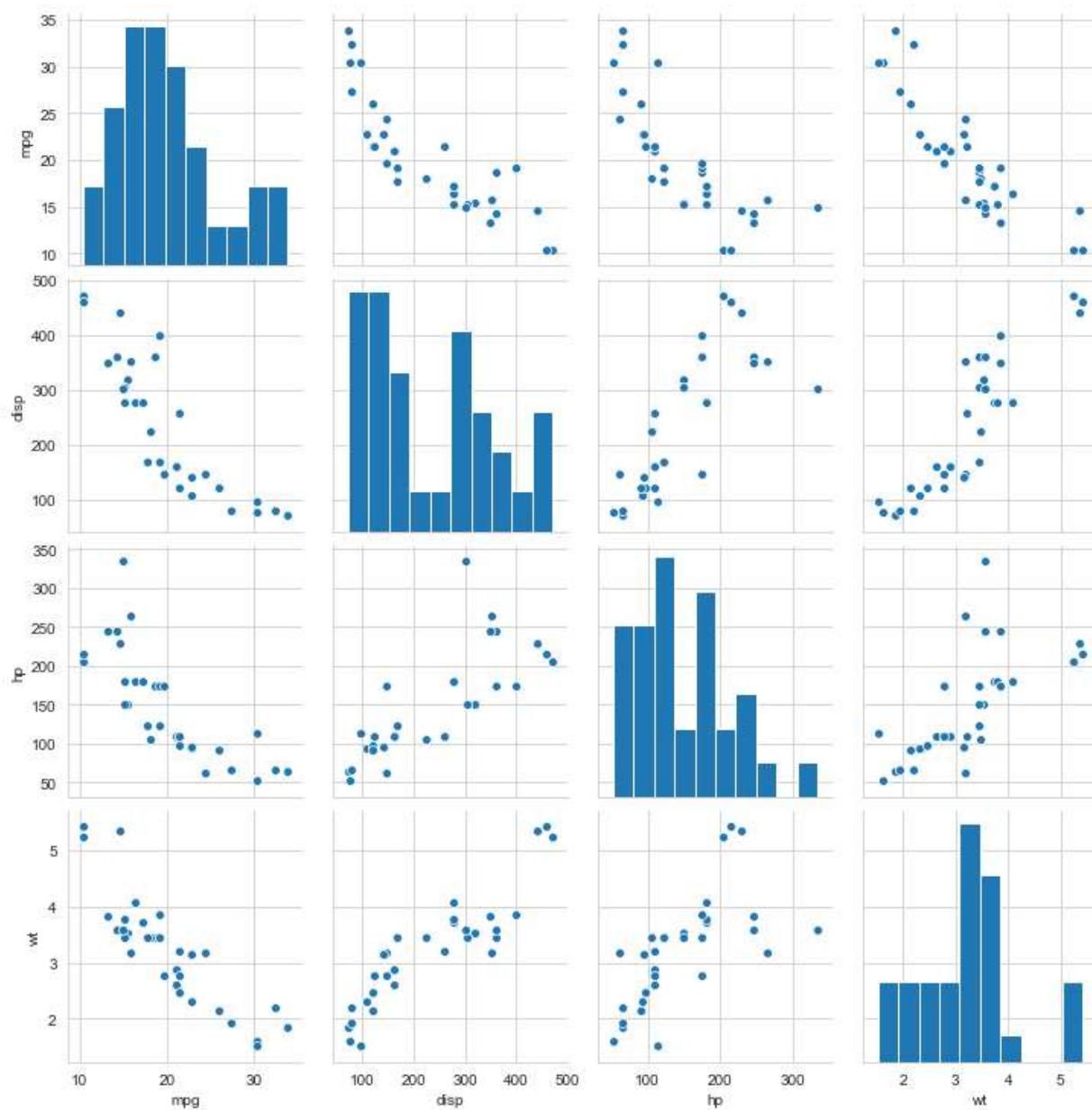
Out[11]: <matplotlib.axes._subplots.AxesSubplot at 0x24946986c48>

Generating a scatter plot matrix
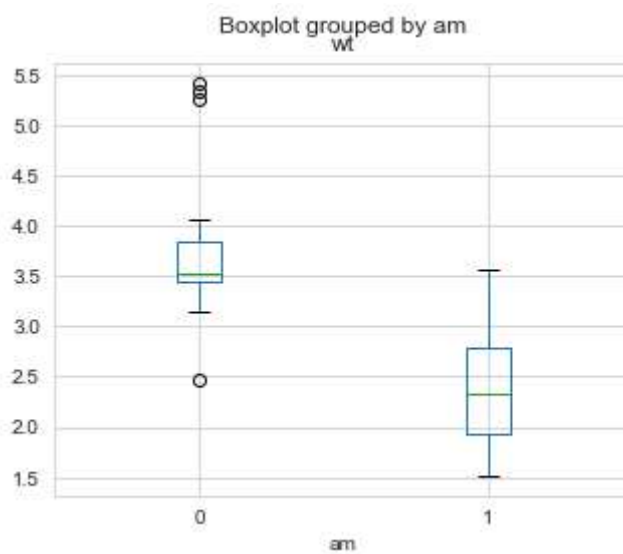
In [12]:
```
sb.pairplot(cars)
```

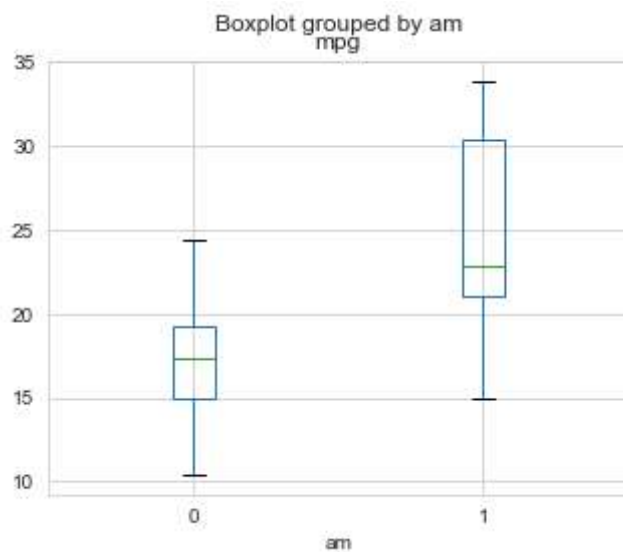Out[12]: `<seaborn.axisgrid.PairGrid at 0x24946a2b7c8>`

In [14]:
```python
cars_subset = cars[['mpg', 'disp', 'hp', 'wt']]
sb.pairplot(cars_subset)
plt.show()
```


Building boxplots

In [16]:
```python
cars.boxplot(column='mpg', by='am')
cars.boxplot(column='wt', by='am')
```

Out[16]: <matplotlib.axes._subplots.AxesSubplot at 0x2494dccdd88>

In [19]: `sb.boxplot(x='am', y='mpg', data=cars, palette='hls')`

Out[19]: `<matplotlib.axes._subplots.AxesSubplot at 0x2494e1cb088>`