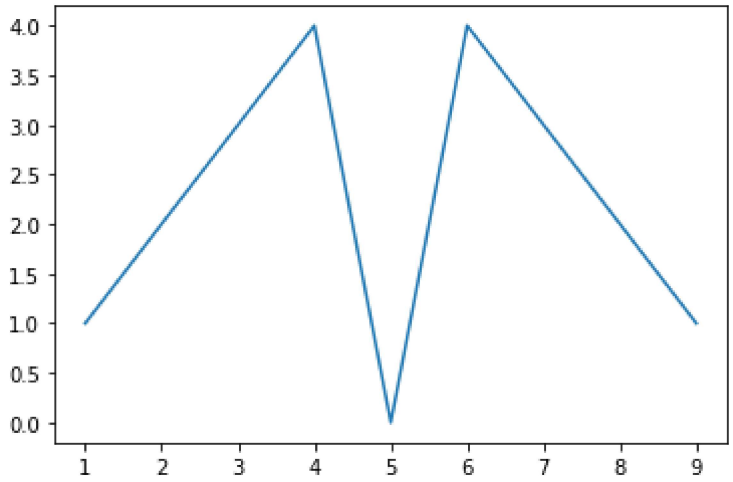
```
Chapter 4 - Practical Data Visualization
Segment 1 - Creating standard data graphics
```

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

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

```
Creating a line chart from a list object

Plotting a line chart in matplotlib
```

In [8]:
```
x = range(1,10)
y = [1,2,3,4,0,4,3,2,1]
plt.plot(x,y)
```

Out[8]:
```
[<matplotlib.lines.Line2D at 0x180bca12388>]
```

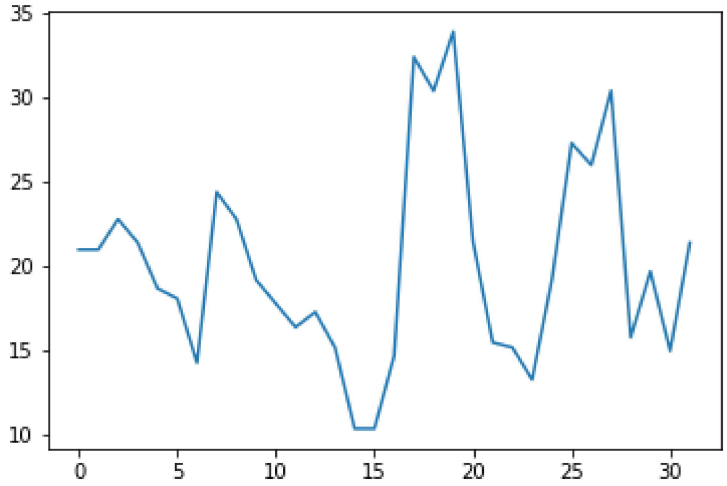



```
1 Plotting a line chart from a Pandas object
```

In [3]:
```
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', 'v

mpg = cars['mpg']
```

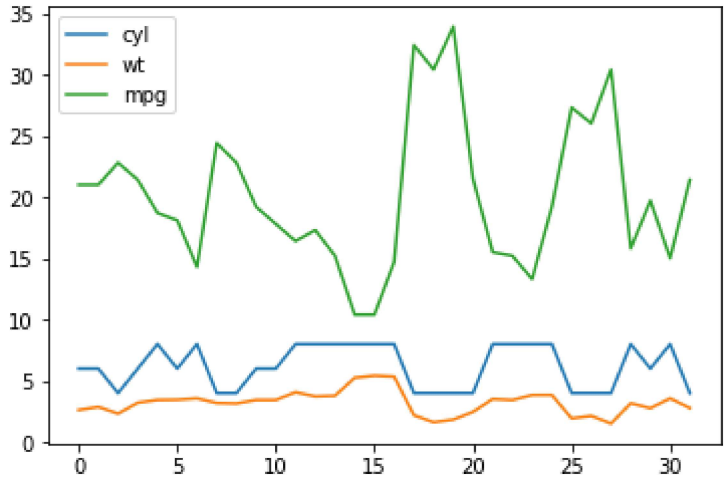
In [4]:
```
mpg.plot()
```

Out[4]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x180bc677f08>
```




In [7]:
```
df = cars[['cyl', 'wt','mpg']]
df.plot()
```

Out[7]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x180bc9694c8>
```

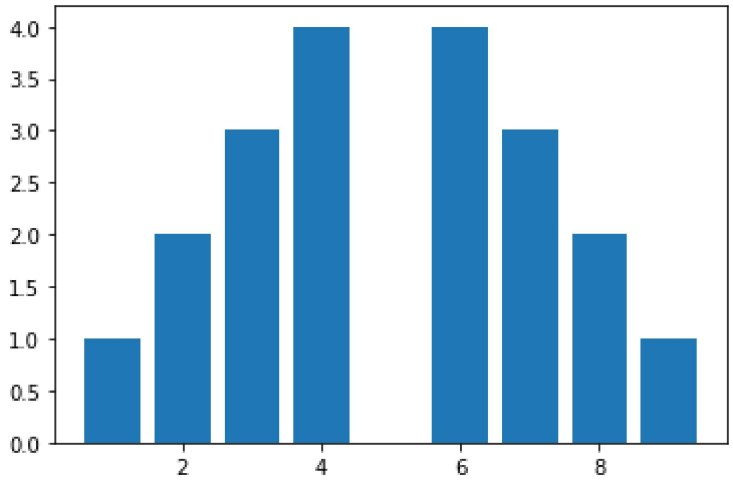



Creating bar charts

Creating a bar chart from a list

In [9]:
```
plt.bar(x, y)
```

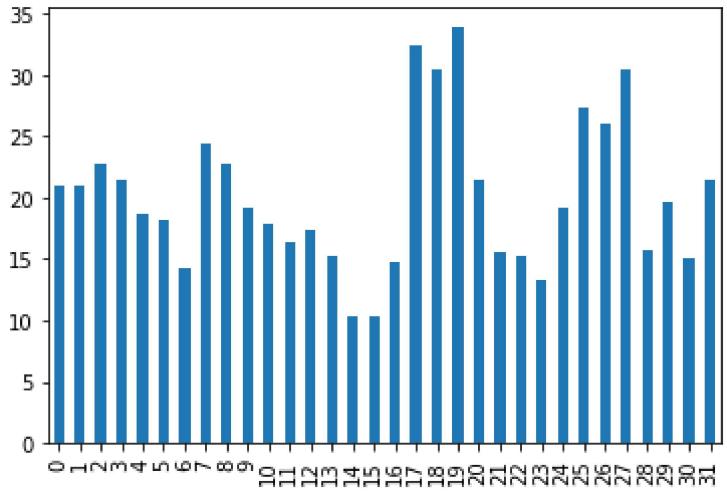
Out[9]:
```
<BarContainer object of 9 artists>
```




Creating bar charts from Pandas objects

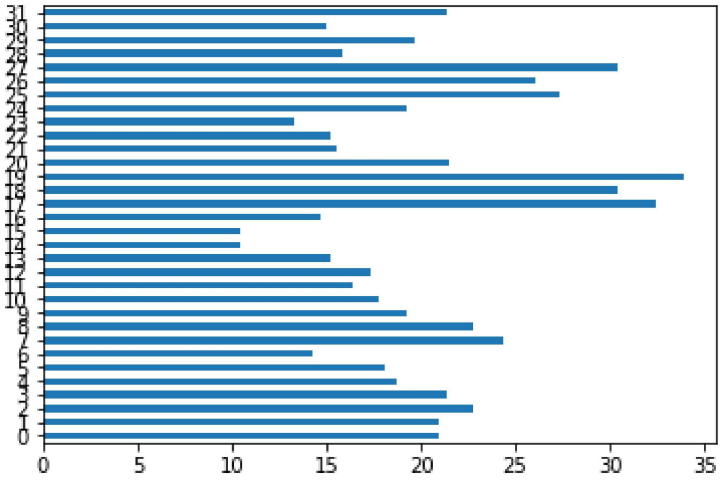
In [10]:
```
mpg.plot(kind="bar")
```

Out[10]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x180bcad7e08>
```



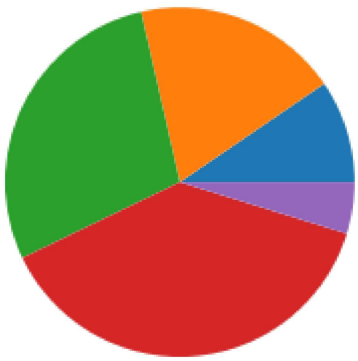
In [11]:
```
mpg.plot(kind="barh")
```

Out[11]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x180bcbd4248>
```



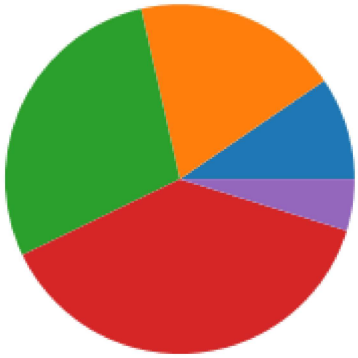

Creating a pie chart

In [12]:
```
x = [1,2,3,4,0.5]
plt.pie(x)
plt.show()
```



Saving a plot

In [13]:
```
plt.pie(x)
plt.savefig('pie_chart.png')
plt.show()
```



```
Identify the present working directory
```

In [14]:
```
%pwd
```

Out[14]:
```
'C:\\Users\\danal'
```