#### Import some important libraries

```
In [11]: import numpy as np
    from numpy.random import randn

import pandas as pd
    from pandas import Series, DataFrame

import seaborn as sb

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

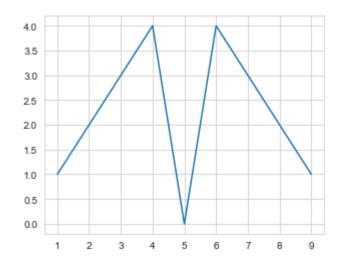
### Configuring the plot using %matplotlib inline, rcParams['figure.figsize'] and sb.set\_style()

```
In [28]: %matplotlib inline
    rcParams['figure.figsize'] = 5, 4
    sb.set_style('whitegrid')
```

#### Try using simple dataset for showing the chart

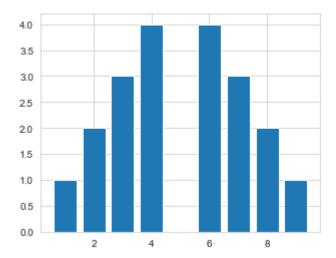
```
In [29]: x = range(1, 10)
y = [1, 2, 3, 4, 0, 4, 3, 2, 1]
plt.plot(x,y)
```

Out[29]: [<matplotlib.lines.Line2D at 0x1de3530>]



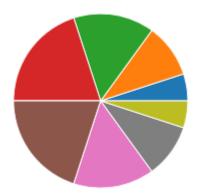
```
In [30]: plt.bar(x,y)
```

Out[30]: <BarContainer object of 9 artists>



```
In [33]: plt.pie(y)
```

```
Out[33]: ([<matplotlib.patches.Wedge at 0x3eafc70>,
           <matplotlib.patches.Wedge at 0x3eafe30>,
           <matplotlib.patches.Wedge at 0x3eba0f0>,
           <matplotlib.patches.Wedge at 0x3eba390>,
           <matplotlib.patches.Wedge at 0x3eba770>,
           <matplotlib.patches.Wedge at 0x3ebaa90>,
           <matplotlib.patches.Wedge at 0x3ebac10>,
           <matplotlib.patches.Wedge at 0x3ebaeb0>,
           <matplotlib.patches.Wedge at 0x3eba630>],
          [Text(1.0864571742518743, 0.1720779140872905, ''),
           Text(0.8899186877588753, 0.6465637858537406, ''),
           Text(0.1720778759417422, 1.086457180293535, ''),
           Text(-0.8899187331606259, 0.6465637233635886, ''),
           Text(-1.099999999999974, -7.724207464605884e-08,
           Text(-0.8899186423571203, -0.6465638483438895, ''),
           Text(0.1720780285239344, -1.0864571561268839, ''),
           Text(0.8899187785623721, -0.6465636608734332, ''),
           Text(1.086457198418509, -0.17207776150509588, '')])
```



# Using dataset from file csv in local computer to showing the chart

```
In [34]: address = 'C:/Users/muham/mtcars.csv'
    cars = pd.read_csv(address)
```

In [35]: cars

Out[35]:

	Unnamed: 0	mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
0	Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	0	1	4	4
1	Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	0	1	4	4
2	Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61	1	1	4	1
3	Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44	1	0	3	1
4	Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.02	0	0	3	2
5	Valiant	18.1	6	225.0	105	2.76	3.460	20.22	1	0	3	1
6	Duster 360	14.3	8	360.0	245	3.21	3.570	15.84	0	0	3	4
7	Merc 240D	24.4	4	146.7	62	3.69	3.190	20.00	1	0	4	2
8	Merc 230	22.8	4	140.8	95	3.92	3.150	22.90	1	0	4	2
9	Merc 280	19.2	6	167.6	123	3.92	3.440	18.30	1	0	4	4
10	Merc 280C	17.8	6	167.6	123	3.92	3.440	18.90	1	0	4	4
11	Merc 450SE	16.4	8	275.8	180	3.07	4.070	17.40	0	0	3	3
12	Merc 450SL	17.3	8	275.8	180	3.07	3.730	17.60	0	0	3	3
13	Merc 450SLC	15.2	8	275.8	180	3.07	3.780	18.00	0	0	3	3
14	Cadillac Fleetwood	10.4	8	472.0	205	2.93	5.250	17.98	0	0	3	4
15	Lincoln Continental	10.4	8	460.0	215	3.00	5.424	17.82	0	0	3	4
16	Chrysler Imperial	14.7	8	440.0	230	3.23	5.345	17.42	0	0	3	4
17	Fiat 128	32.4	4	78.7	66	4.08	2.200	19.47	1	1	4	1
18	Honda Civic	30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
19	Toyota Corolla	33.9	4	71.1	65	4.22	1.835	19.90	1	1	4	1
20	Toyota Corona	21.5	4	120.1	97	3.70	2.465	20.01	1	0	3	1
21	Dodge Challenger	15.5	8	318.0	150	2.76	3.520	16.87	0	0	3	2
22	AMC Javelin	15.2	8	304.0	150	3.15	3.435	17.30	0	0	3	2
23	Camaro Z28	13.3	8	350.0	245	3.73	3.840	15.41	0	0	3	4
24	Pontiac Firebird	19.2	8	400.0	175	3.08	3.845	17.05	0	0	3	2
25	Fiat X1-9	27.3	4	79.0	66	4.08	1.935	18.90	1	1	4	1
26	Porsche 914-2	26.0	4	120.3	91	4.43	2.140	16.70	0	1	5	2
27	Lotus Europa	30.4	4	95.1	113	3.77	1.513	16.90	1	1	5	2
28	Ford Pantera L	15.8	8	351.0	264	4.22	3.170	14.50	0	1	5	4
29	Ferrari Dino	19.7	6	145.0	175	3.62	2.770	15.50	0	1	5	6
30	Maserati Bora	15.0	8	301.0	335	3.54	3.570	14.60	0	1	5	8
31	Volvo 142E	21.4	4	121.0	109	4.11	2.780	18.60	1	1	4	2

Out[40]:

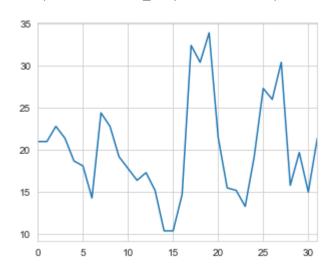
Unnamed: 0	mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	0	1	4	4
Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	0	1	4	4
Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61	1	1	4	1
Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44	1	0	3	1
Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.02	0	0	3	2
Valiant	18.1	6	225.0	105	2.76	3.460	20.22	1	0	3	1
Duster 360	14.3	8	360.0	245	3.21	3.570	15.84	0	0	3	4
Merc 240D	24.4	4	146.7	62	3.69	3.190	20.00	1	0	4	2
Merc 230	22.8	4	140.8	95	3.92	3.150	22.90	1	0	4	2
Merc 280	19.2	6	167.6	123	3.92	3.440	18.30	1	0	4	4
Merc 280C	17.8	6	167.6	123	3.92	3.440	18.90	1	0	4	4
Merc 450SE	16.4	8	275.8	180	3.07	4.070	17.40	0	0	3	3
Merc 450SL	17.3	8	275.8	180	3.07	3.730	17.60	0	0	3	3
Merc 450SLC	15.2	8	275.8	180	3.07	3.780	18.00	0	0	3	3
Cadillac Fleetwood	10.4	8	472.0	205	2.93	5.250	17.98	0	0	3	4
Lincoln Continental	10.4	8	460.0	215	3.00	5.424	17.82	0	0	3	4
Chrysler Imperial	14.7	8	440.0	230	3.23	5.345	17.42	0	0	3	4
Fiat 128	32.4	4	78.7	66	4.08	2.200	19.47	1	1	4	1
Honda Civic	30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
Toyota Corolla	33.9	4	71.1	65	4.22	1.835	19.90	1	1	4	1
Toyota Corona	21.5	4	120.1	97	3.70	2.465	20.01	1	0	3	1
Dodge Challenger	15.5	8	318.0	150	2.76	3.520	16.87	0	0	3	2
AMC Javelin	15.2	8	304.0	150	3.15	3.435	17.30	0	0	3	2
Camaro Z28	13.3	8	350.0	245	3.73	3.840	15.41	0	0	3	4
Pontiac Firebird	19.2	8	400.0	175	3.08	3.845	17.05	0	0	3	2
Fiat X1-9	27.3	4	79.0	66	4.08	1.935	18.90	1	1	4	1
Porsche 914-2	26.0	4	120.3	91	4.43	2.140	16.70	0	1	5	2
Lotus Europa	30.4	4	95.1	113	3.77	1.513	16.90	1	1	5	2
Ford Pantera L	15.8	8	351.0	264	4.22	3.170	14.50	0	1	5	4
Ferrari Dino	19.7	6	145.0	175	3.62	2.770	15.50	0	1	5	6
Maserati Bora	15.0	8	301.0	335	3.54	3.570	14.60	0	1	5	8
Volvo 142E	21.4	4	121.0	109	4.11	2.780	18.60	1	1	4	2
	Mazda RX4 Wag Datsun 710 Hornet 4 Drive Hornet Sportabout Valiant Duster 360 Merc 240D Merc 230 Merc 280C Merc 450SE Merc 450SE Merc 450SL Merc 450SLC Cadillac Fleetwood Lincoln Continental Chrysler Imperial Fiat 128 Honda Civic Toyota Corolla Toyota Corona Dodge Challenger AMC Javelin Camaro Z28 Pontiac Firebird Fiat X1-9 Porsche 914-2 Lotus Europa Ford Pantera L Ferrari Dino Maserati Bora	Mazda RX4       21.0         Mazda RX4 Wag       21.0         Datsun 710       22.8         Hornet 4 Drive       21.4         Hornet Sportabout       18.7         Valiant       18.1         Duster 360       14.3         Merc 240D       24.4         Merc 230       22.8         Merc 280       19.2         Merc 450SE       16.4         Merc 450SL       17.3         Merc 450SL       15.2         Cadillac Fleetwood       10.4         Lincoln Continental       10.4         Chrysler Imperial       14.7         Fiat 128       32.4         Honda Civic       30.4         Toyota Corolla       33.9         Toyota Corolla       33.9         Toyota Corona       21.5         Dodge Challenger       15.5         AMC Javelin       15.2         Camaro Z28       13.3         Pontiac Firebird       19.2         Fiat X1-9       27.3         Porsche 914-2       26.0         Lotus Europa       30.4         Ford Pantera L       15.8         Ferrari Dino       19.7         Mas	Mazda RX4 Vag 21.0 6 Mazda RX4 Wag 21.0 6 Datsun 710 22.8 4 Hornet 4 Drive 21.4 6 Hornet Sportabout 18.7 8 Valiant 18.1 6 Duster 360 14.3 8 Merc 240D 24.4 4 Merc 230 22.8 4 Merc 280C 17.8 6 Merc 450SE 16.4 8 Merc 450SE 16.4 8 Merc 450SL 17.3 8 Merc 450SL 17.3 8 Cadillac Fleetwood 10.4 8 Lincoln Continental 10.4 8 Chrysler Imperial 14.7 8 Chrysler Imperial 14.7 8 Fiat 128 32.4 4 Honda Civic 30.4 4 Toyota Corona 21.5 4 Dodge Challenger 15.5 8 AMC Javelin 15.2 8 Camaro Z28 13.3 8 Pontiac Firebird 19.2 8 Fiat X1-9 27.3 4 Porsche 914-2 26.0 4 Lotus Europa 30.4 4 Ford Pantera L 15.8 8 Ferrari Dino 19.7 6 Maserati Bora 15.0 8	Mazda RX4         21.0         6         160.0           Mazda RX4 Wag         21.0         6         160.0           Datsun 710         22.8         4         108.0           Hornet 4 Drive         21.4         6         258.0           Hornet Sportabout         18.7         8         360.0           Valiant         18.1         6         225.0           Duster 360         14.3         8         360.0           Merc 240D         24.4         4         146.7           Merc 230         22.8         4         140.8           Merc 280C         17.8         6         167.6           Merc 450SE         16.4         8         275.8           Merc 450SL         17.3         8         275.8           Cadillac Fleetwood         10.4         8         472.0           Lincoln Continental         10.4         8         460.0           Chrysler Imperial         14.7         8         440.0           Fiat 128         32.4         4         75.7           Toyota Corola         33.9         4         71.1           Toyota Corola         31.5         8         318.0	Mazda RX4         21.0         6         160.0         110           Mazda RX4 Wag         21.0         6         160.0         110           Datsun 710         22.8         4         108.0         93           Hornet 4 Drive         21.4         6         258.0         110           Hornet Sportabout         18.7         8         360.0         175           Valiant         18.1         6         225.0         105           Duster 360         14.3         8         360.0         245           Merc 240D         24.4         4         146.7         62           Merc 280         19.2         6         167.6         123           Merc 280C         17.8         6         167.6         123           Merc 450SL         17.3         8         275.8         180           Merc 450SL         15.2         8         275.8         180           Cadillac Fleetwood         10.4         8         472.0         205           Lincoln Continental         10.4         8         460.0         215           Chrysler Imperial         14.7         8         440.0         230           Fiat 128	Mazda RX4         21.0         6         160.0         110         3.90           Mazda RX4 Wag         21.0         6         160.0         110         3.90           Datsun 710         22.8         4         108.0         93         3.85           Hornet A Drive         21.4         6         258.0         110         3.08           Hornet Sportabout         18.7         8         360.0         175         3.15           Valiant         18.1         6         225.0         105         2.76           Duster 360         14.3         8         360.0         245         3.21           Merc 240D         24.4         4         146.7         62         3.69           Merc 230         22.8         4         140.8         95         3.92           Merc 280C         17.8         6         167.6         123         3.92           Merc 450SE         16.4         8         275.8         180         3.07           Merc 450SE         17.2         8         275.8         180         3.07           Cadillac Fleetwood         10.4         8         472.0         205         2.93           Lincoln Co	Mazda RX4         21.0         6         160.0         110         3.90         2.620           Mazda RX4 Wag         21.0         6         160.0         110         3.90         2.875           Datsun 710         22.8         4         108.0         93         3.85         2.320           Hornet Sportabout         18.7         8         360.0         175         3.15         3.440           Valiant         18.1         6         225.0         105         2.76         3.460           Duster 360         14.3         8         360.0         245         3.21         3.570           Merc 240D         24.4         4         146.7         62         3.69         3.190           Merc 240D         22.8         4         140.8         95         3.92         3.440           Merc 280C         17.8         6         167.6         123         3.92         3.440           Merc 450SLC         17.3         8         275.8         180         3.07         3.730           Merc 450SLC         15.2         8         275.8         180         3.07         3.780           Cadillac Fleetwood         10.4         8         <	Mazda RX4         21.0         6         160.0         110         3.90         2.620         16.46           Mazda RX4 Wag         21.0         6         160.0         110         3.90         2.875         17.02           Datsun 710         22.8         4         108.0         93         3.85         2.320         18.61           Hornet A Drive         21.4         6         258.0         110         3.08         3.215         19.44           Hornet Sportabout         18.7         8         360.0         175         3.15         3.400         27.02           Valiant         18.1         6         225.0         105         2.76         3.400         20.22           Duster 360         14.3         8         360.0         245         3.21         3.500         20.00           Merc 240D         24.4         4         140.8         95         3.92         3.150         22.90           Merc 280C         17.8         6         167.6         123         3.92         3.400         18.30           Merc 450SL         17.3         8         275.8         180         3.07         3.780         18.00           Cadillac Fleetwoo	Mazda RX4         21.0         6         160.0         110         3.90         2.620         16.6         0           Mazda RX4 Wag         21.0         6         160.0         110         3.90         2.875         17.02         0           Datsun 710         22.8         4         108.0         93         3.85         2.320         18.61         1           Hornet 4 Drive         21.4         6         258.0         110         3.08         3.215         19.44         1           Hornet Sportabout         18.7         8         360.0         175         3.15         3.40         17.02         0           Valiant         18.1         6         225.0         105         2.76         3.40         17.02         0           Mer 240D         14.3         8         360.0         245         3.21         3.570         15.84         0           Merc 240D         24.4         4         146.7         62         3.92         3.40         18.30         1           Merc 240D         17.8         6         167.6         123         3.92         3.40         18.30         1           Merc 280D         17.3         8 <th>Mazda RX4         21.0         6         160.0         110         3.90         2.62         16.46         0         1           Mazda RX4 Wag         21.0         6         160.0         110         3.90         2.875         17.02         0         1           Datsun 710         22.8         4         108.0         93         3.85         2.320         18.61         1         1         0           Hornet 4 Drive         21.4         6         258.0         110         3.08         3.215         19.44         1         0         0           Valiant         18.1         6         255.0         105         2.76         3.460         20.22         1         0         0           Duster 360         14.3         8         360.0         245         3.21         3.570         15.84         0         0         0           Merc 240D         24.4         4         146.7         62         3.69         3.190         20.00         1         0         0           Merc 240D         12.4         4         146.7         62         3.69         3.190         20.00         1         0           Merc 280D</th> <th>Mazda RXA         21.0         6         160.0         110         3.90         2.620         16.46         0         1         4           Mazda RXA Wag         21.0         6         160.0         110         3.90         2.875         17.02         0         1         4           Datsun 710         22.8         4         108.0         93         3.85         2.320         18.61         1         1         4           Homet 4 Drive         21.4         6         258.0         110         3.08         3.215         19.44         1         0         3           Waliant         18.1         6         225.0         105         2.76         3.40         17.02         0         0         3           Duster 360         14.3         8         360.0         245         3.21         3.570         15.84         0         0         3           Merc 2400         24.4         4         146.7         62         3.69         3.190         20.00         1         0         4           Merc 280C         17.8         6         167.6         123         3.92         3.440         18.90         1         0         4</th>	Mazda RX4         21.0         6         160.0         110         3.90         2.62         16.46         0         1           Mazda RX4 Wag         21.0         6         160.0         110         3.90         2.875         17.02         0         1           Datsun 710         22.8         4         108.0         93         3.85         2.320         18.61         1         1         0           Hornet 4 Drive         21.4         6         258.0         110         3.08         3.215         19.44         1         0         0           Valiant         18.1         6         255.0         105         2.76         3.460         20.22         1         0         0           Duster 360         14.3         8         360.0         245         3.21         3.570         15.84         0         0         0           Merc 240D         24.4         4         146.7         62         3.69         3.190         20.00         1         0         0           Merc 240D         12.4         4         146.7         62         3.69         3.190         20.00         1         0           Merc 280D	Mazda RXA         21.0         6         160.0         110         3.90         2.620         16.46         0         1         4           Mazda RXA Wag         21.0         6         160.0         110         3.90         2.875         17.02         0         1         4           Datsun 710         22.8         4         108.0         93         3.85         2.320         18.61         1         1         4           Homet 4 Drive         21.4         6         258.0         110         3.08         3.215         19.44         1         0         3           Waliant         18.1         6         225.0         105         2.76         3.40         17.02         0         0         3           Duster 360         14.3         8         360.0         245         3.21         3.570         15.84         0         0         3           Merc 2400         24.4         4         146.7         62         3.69         3.190         20.00         1         0         4           Merc 280C         17.8         6         167.6         123         3.92         3.440         18.90         1         0         4

## Try using plot line, bar and pie with pandas object

For LINE CHART, we use the .plot() function

```
In [48]: mpg = cars['mpg']
mpg.plot()
```

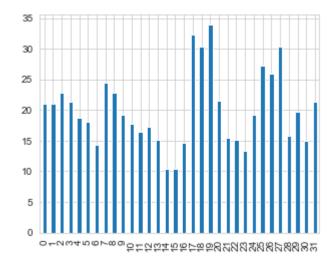
Out[48]: <matplotlib.axes.\_subplots.AxesSubplot at 0x609f030>



For BAR CHART, we use the .plot(kind = 'bar') function

```
In [49]: mpg.plot(kind = 'bar')
```

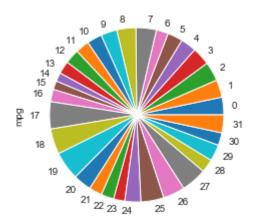
Out[49]: <matplotlib.axes.\_subplots.AxesSubplot at 0x60e5fd0>



For PIE CHART, we use the .plot(kind = 'pie') function

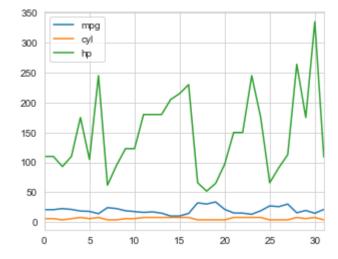
```
In [50]: mpg.plot(kind = 'pie')
```

Out[50]: <matplotlib.axes.\_subplots.AxesSubplot at 0x616e070>



```
In [53]: tigadata = cars[['mpg', 'cyl', 'hp']]
tigadata.plot()
```

Out[53]: <matplotlib.axes.\_subplots.AxesSubplot at 0xb4e38b0>



In [54]: tigadata.plot(kind = 'bar')

Out[54]: <matplotlib.axes.\_subplots.AxesSubplot at 0xb605b90>

