The `round()` function

In this notebook we look at the `round()` function

In [2]:

```
# round() rounds (off) the argument.  Rounding is up or down based on the argument.
x = 46.5
y = round(x)
print('x is:', x, ' and y is:', y)
```

```
x is: 46.5  and y is: 46
```

In [3]:

```
'''
round()  accepts an optional argument which dictates the number of decimal places for rounding
A positive value of n for the optional argument means that the number will be rounded to n digits
after the decimal point
'''
x = 45.24589
y = round(x)
z = round(x, 3)
print('x is:', x, 'y is:', y, 'and z is:', z)
```

```
x is: 45.24589 y is: 45 and z is: 45.246
```

In [5]:

```
'''
The optional argument in round() can be negative and specifies the number of places to
the left of the decimal point for rounding.  That is, a value of -n means that n places
to the left of the decimal point will be converted to zero.  The n+1th place to the left will be t
he rounded digit
'''
x = 49.24589
y = round(x, -3)
print('x is:', x, ' and y is:', y)
```

```
x is: 49.24589  and y is: 0.0
```

In [1]:

```
# what is?
print(round(6358923, -4))
print(round(488.45,-2))
```

```
6360000
500.0
```