Coding the Matrix - Chapter 2

- Vector
  - magnitude and direction
  - A list of numbers
  - Number of elements in a vector indicates dimension.
  - A vector of n elements is called an n-vector

ex: $X = [3, 5, -1]$

X is a 3-vector

- Vector addition - adding each element of the vector with each element of another vector.

ex: $X = [3, 5, -1]$

$Y = [1, 4, 10]$

$X + Y = [4, 9, 9]$

```
def add2(V, W):
    return [V[0] + W[0], V[1] + W[1]]
```

$X = [1, 4]$

$Y = [3, 5]$

ex: add2(X, Y)

output: [4, 9]

computing sum of n-vectors with n elements:

```
def addn(*args):
    return [sum(x) for x in zip(*args)]
```

zip = add together

* = unlimited amount of args