Broadcasting Rule

*Dimensions Should be equal
*There should be 1 present in any one array.{ like (1x3)(3x1)}

In [12]:
```
import numpy as np
a = np.array([1,2,3])
a
```

Out[12]:
```
array([1, 2, 3])
```

In [13]:
```
b = np.array([[1],[2],[3]])
print(b)
```

```
[[1]
 [2]
 [3]]
```

In [14]:
```
print(a+b)
```

```
[[2 3 4]
 [3 4 5]
 [4 5 6]]
```

In [16]:
```
x = np.array([[1,2,3],[4,5,6]])
x.shape
```

Out[16]:
```
(2, 3)
```

In [18]:
```
y = np.array([[5],[6]])
y.shape
```

Out[18]:
```
(2, 1)
```

In [19]:
```
x+y
```

Out[19]:
```
array([[ 6,  7,  8],
       [10, 11, 12]])
```

In [20]:
```
val1 = np.array([[1,2,3],[4,5,6]])
val1.shape
```

Out[20]:
```
(2, 3)
```

In [21]:
```
val2 = np.array([[1,2,3,4],[4,5,6,7]])
val2.shape
```

Out[21]:
```
(2, 4)
```

In [22]:
```
val1 + val2
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_5300\2285107672.py in <module>
----> 1 val1 + val2

ValueError: operands could not be broadcast together with shapes (2,3) (2,4)
```

In [ ]:
```

```