Write a function so that the columns of the output matrix are powers of the input vector. The order of the powers is determined by the increasing boolean argument. Specifically, when increasing is False, The i-th output column is the input vector raised element-wise to the power of N - i - 1.

In [1]:
```
import numpy as np

def Vandermonde(list, N, flag = True):
    return np.vander(list, N, increasing = flag)

x = np.array([1, 2, 3, 4])
print("Alexandre Theophile Vandermonde matrix is True:\n",Vandermonde(x, 4 , True
print("")
print("Alexandre Theophile Vandermonde matrix is False:\n", Vandermonde(x, 4, Fal
```

```
Alexandre Theophile Vandermonde matrix is True:
 [[ 1  1  1  1]
 [ 1  2  4  8]
 [ 1  3  9 27]
 [ 1  4 16 64]]

Alexandre Theophile Vandermonde matrix is False:
 [[ 1  1  1  1]
 [ 8  4  2  1]
 [27  9  3  1]
 [64 16  4  1]]
```

In [ ]: