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NUMPY

NumPy

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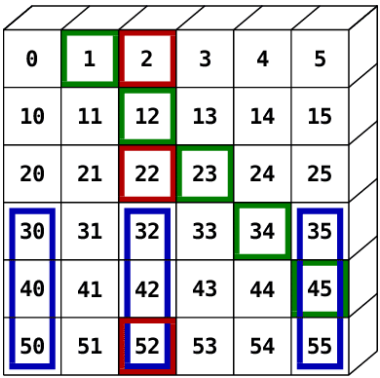
- Numpy is a popular array – processing package of Python. It provides good support for different dimensional array objects as well as for matrices. Numpy is not only confined to providing arrays only, but it also provides a variety of tools to manage these arrays.
- It is fast, efficient, and really good for managing matrice and arrays.


```
>>> a[(0,1,2,3,4), (1,2,3,4,5)]
array([1, 12, 23, 34, 45])

>>> a[3:, [0,2,5]]
array([[30, 32, 35],
       [40, 42, 45],
       [50, 52, 55]])

>>> mask = np.array([1,0,1,0,0,1], dtype=bool)
>>> a[mask, 2]
array([2, 22, 52])
```



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FEATURES OF NUMPY

- **Arrays of Numpy offer modern mathematical implementations on a huge amount of data. Numpy makes the execution of these projects much easier and hassle-free.**
- **Numpy provides masked arrays along with general array objects. It also comes with functionalities such as manipulation of logical shapes, discrete Fourier transform, general linear algebra, and many more.**
- **While you change the shape of any N-dimensional arrays, Numpy will create new arrays for that and delete the old ones.**

- This python package provides useful tools for integration. You can easily integrate Numpy with programming languages such as C, C++, and Fortran code.
- Numpy provides such functionalities that are comparable to MATLAB. They both allow users to get faster with operations.