

- 1. What is NumPy?**

NumPy is a Python library used for numerical computing, especially for working with arrays and mathematical operations.

- 2. Why is NumPy faster than Python lists?**

NumPy uses optimized C code and stores data in contiguous memory, making operations faster than Python lists.

- 3. What is an ndarray?**

An ndarray is a multi-dimensional array object in NumPy that stores elements of the same data type.

- 4. Difference between array and list**

A NumPy array stores same-type elements and supports fast mathematical operations, while a Python list can store different data types and is slower.

- 5. What is broadcasting?**

Broadcasting is a NumPy feature that allows operations between arrays of different shapes by automatically expanding smaller arrays.