Tristan A Knott

SE126.02 Intermediate Prog using Python

Marty Truchon

1/25/2023

Difference Between Lists & Arrays

Python lists and arrays are both data structures used to store collections of items, but they have some key differences in how they operate and what they are best suited for. Lists are a built-in Python data type, while arrays are a separate data structure that must be imported from the array module. Lists are more flexible than arrays because they can store items of any data type, while arrays can only store items of a single data type. This makes lists better suited for tasks that require storing multiple data types, while arrays are better suited for tasks that involve mathematical operations on large sets of numbers.

Another difference between lists and arrays is that lists are implemented as dynamic arrays, meaning that their size can change as items are added or removed. In contrast, arrays have a fixed size, so they cannot be resized once they are created. This means that lists are better suited for tasks that require dynamic resizing, such as working with large datasets, while arrays are better suited for tasks that require a fixed-size data structure.

In terms of performance, arrays generally perform better than lists when working with large sets of numerical data, as they are more memory-efficient and support faster mathematical operations. This is due to the fact that arrays store their data in a contiguous block of memory, which allows for faster access and manipulation of the data. In contrast, lists store their data in individual objects, which can take up more memory and make operations slower.

https://www.geeksforgeeks.org/difference-between-list-and-array-in-python/

https://favtutor.com/blogs/python-array-vs-list

https://learnpython.com/blog/python-array-vs-list/