# REPORT

Array in Python

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# Array in Python.

Arrays are a fundamental data structure, and an important part of most programming languages. In Python, they are containers which are able to store more than one item at the same time.

Specifically, they are an ordered collection of elements with every value being of the same data type. That is the most important thing to remember about Python arrays - the fact that they can only hold a sequence of multiple items that are of the same type.

Existence of Arrays in Python:

Contrary to popular belief, Python does indeed have support for arrays through the array module in its standard library. The array module provides a more memory-efficient alternative to lists when dealing with homogeneous data types, as arrays store elements of the same data type.

Why Aren't Arrays Widely Used in Python?

- Lack of Flexibility: Arrays in Python are constrained to hold elements of a single data type, which limits their flexibility compared to lists that can contain heterogeneous data.
- Limited Functionality: Arrays offer fewer built-in functions and methods compared to lists, making lists more appealing for general-purpose programming.
- Indexing Limitation: Arrays in Python do not support the wide range of indexing and slicing operations that lists do, making lists more versatile for manipulating data.
- Sparse Documentation: The array module lacks comprehensive documentation and examples compared to other built-in data structures like lists, which may discourage developers from exploring its usage.