

# Arrays vs. vector

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Why use an array if **vector** is so much more convenient? Why bother learning about arrays at all? Here's why.

- **vector** elements are always **allocated on the heap**
- Arrays may be **allocated on the stack, static area, or the heap**. This avoids performance issues that arise with dynamic memory.
- Arrays often have **higher performance** and **take less memory**.
- Arrays are generally used for low-level **systems programming** (operating systems)
- Array performance is **deterministic**; for this reason, arrays are normally used for **embedded programs** that must run for long periods of time.

In short, arrays are usually faster and may take less memory than dynamic library types like **string** and **vector**. Using arrays in C++ is programming **as the CPU sees it**.



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