PHP DS - CHEAT SHEET

Core Idea:

Arrays in PHP are hash tables. Ds provides purpose-built data structures in C for predictable performance and clear intent.

Decision Guide:

List -> Vector

Both ends -> Deque

LIFO -> Stack

FIFO -> Queue

Importance first -> PriorityQueue

Key→Value -> Map

Unique values -> Set

Structures:

Vector: Contiguous memory, fast iteration, true O(1) index.

Deque: O(1) front/back add/remove, perfect for history buffers.

Stack: LIFO (undo, parsing).

Queue: FIFO (task pipelines).

PriorityQueue: Heap-based, process by importance.

Map: Clean key→value lookup.

Set: Unique values, O(1) membership check.

Interfaces:

Sequence = ordered + indexable (Vector, Deque)

Hashable = custom key hashing (for Map & Set)

Takeaway:

Choose data structure based on access pattern, not convenience.