**. Stack**

* **Definition**: A Stack is a collection based on the *Last-In-First-Out (LIFO)* principle. The last item added is the first to be removed.
* **Key Use Cases**:
  + Undo operations (text editors, drawing apps).
  + Backtracking algorithms (e.g., navigating mazes or trees).
  + Expression evaluation and conversion (infix to postfix).
  + Memory management (function call stack).
* **Common Methods**:
  + Push(item): Adds an item to the stack.
  + Pop(): Removes and returns the top item.
  + Peek(): Returns the top item without removing it.
  + Contains(item): Checks if an item exists in the stack.
  + Clear(): Removes all items.