Min Stack

For this problem the goal is to design a stack that supports retrieving the minimum element in O(1) time while also supporting standard stack operations.

Key Idea:

Auxiliary Stack

We use two stacks:

1. Main stack: Stores all pushed values.
2. Min stack: Stores the minimum value at each level.

- When pushing:
  - Push value to main stack
  - Push min(value, current_min) to min stack.
- When popping:
  - Pop from both stacks.
- top() returns the top of the main stack.
- getMin() returns the top of the min stack.

Complexity:

- Time: O(1) for all operations.
- Space: O(n) (two stacks store values).