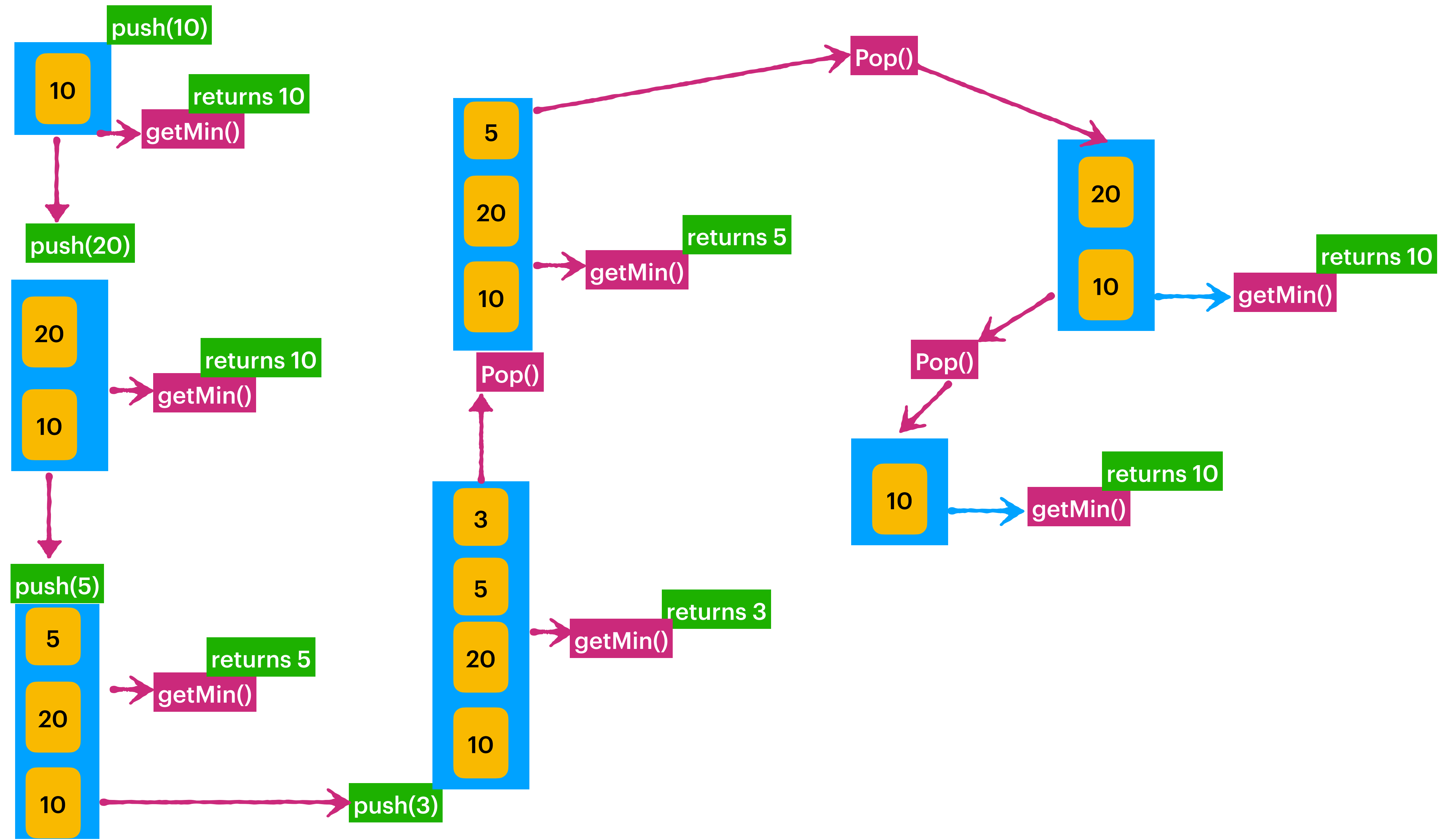


# Design Min Stack

Design a stack that supports push, pop, peek, and retrieving the minimum element in constant time.



## Valid Parentheses

Given a string `s` containing just the characters `'('`, `)'`, `'{'`, `'}'`, `'['` and `']'`, determine if the input string is valid.

An input string is valid if:

- 1) Open brackets must be closed by the same type of brackets.
- 2) Open brackets must be closed in the correct order.

**Input:** `s = "()"`  
Output: true

**Input:** `s = "("`  
Output: false

**Input:** `s = "()[]{}"`  
Output: true

**Input:** `s = "([])"`  
Output: false

**Input:** `s = "{[]}"`  
Output: true

**Input:** `s = ")"`  
Output: false