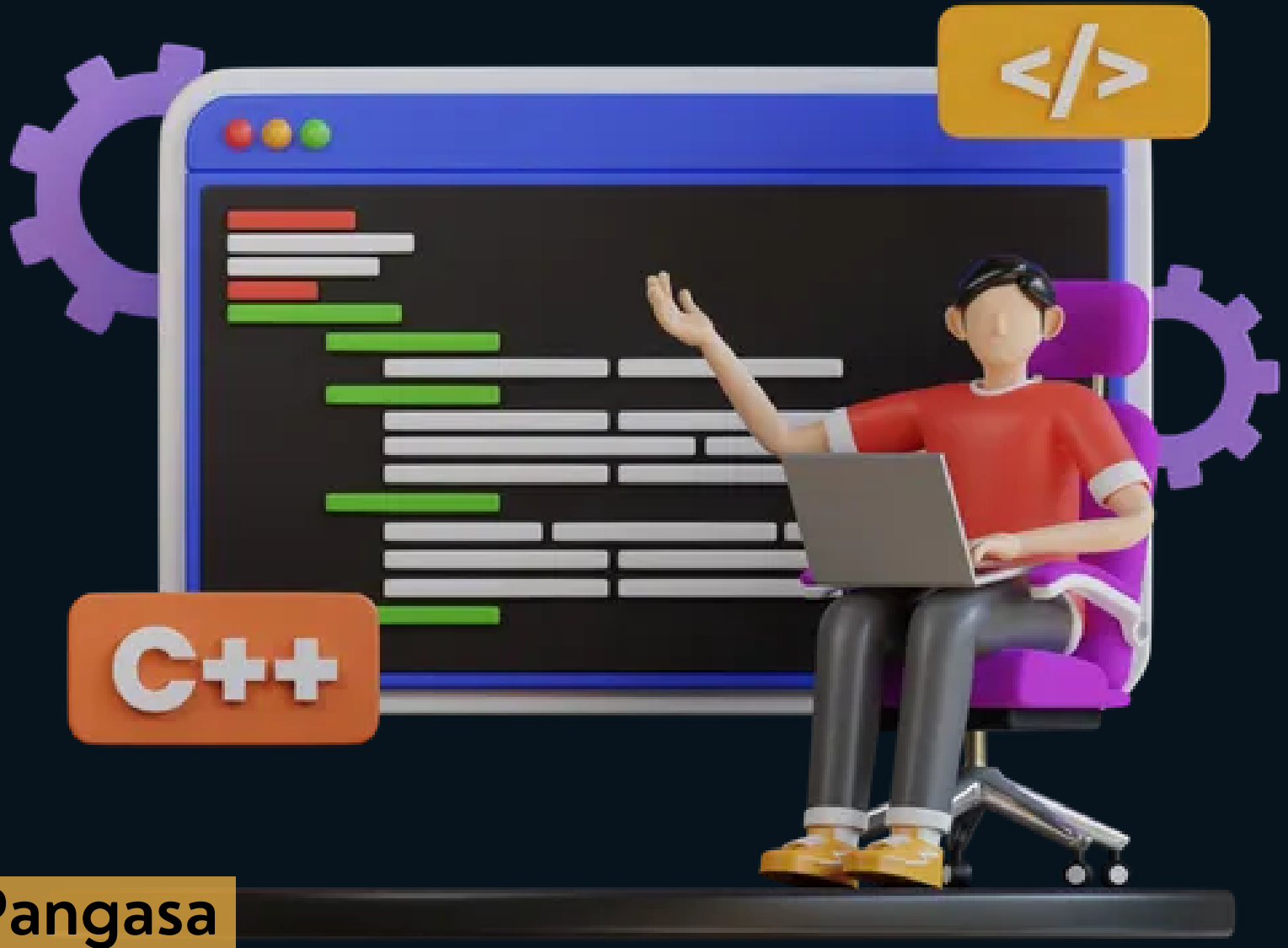
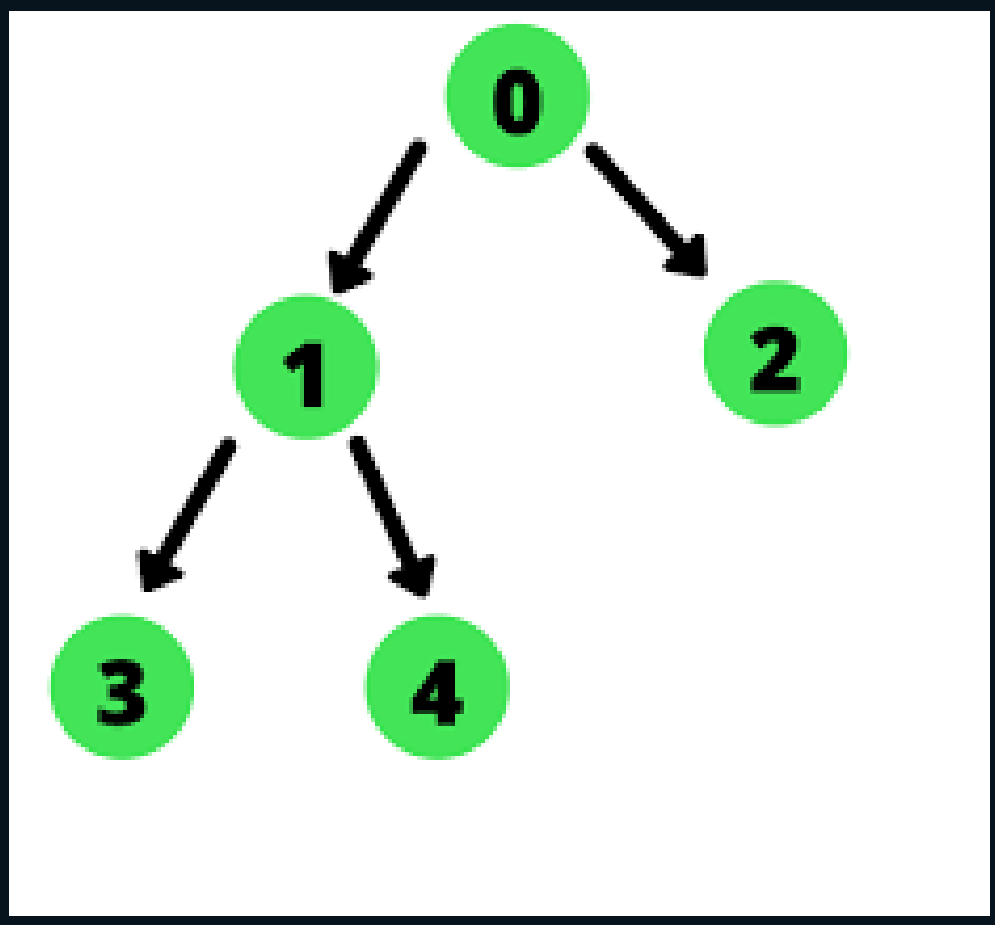
Algorithms and Their Everyday usecase



Ankit Pangasa

Breadth-First Search (BFS)

- Web Crawling
- Social Network Analysis
- Puzzle Solving



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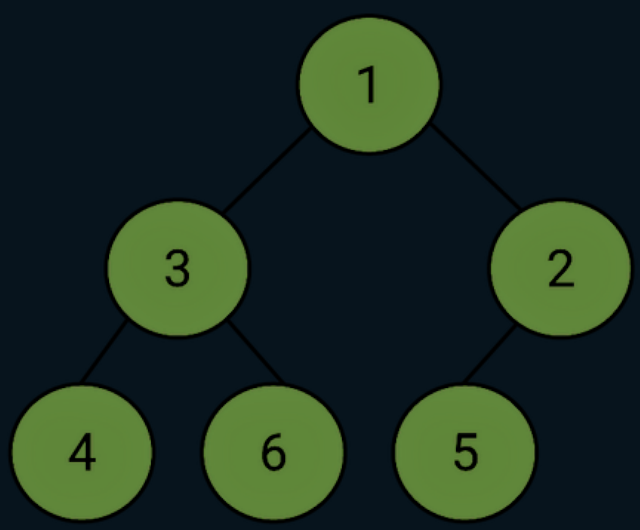
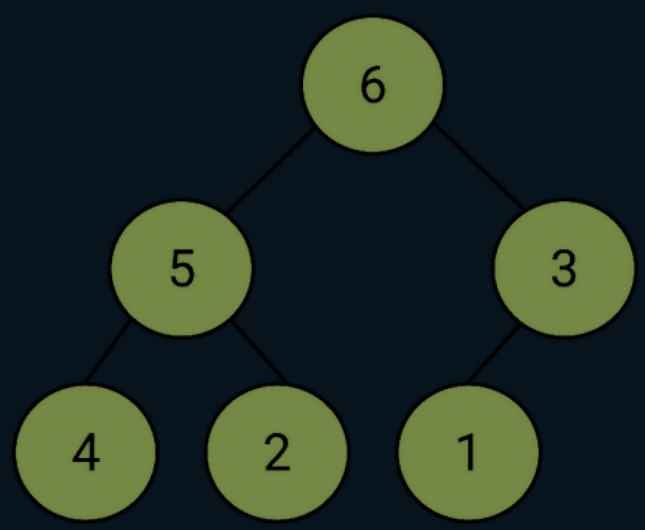
SWIPE →

Two Heaps

- Manage a priority queue in a schedule.
- Maintaining the median of a dynamic data set.



Min heap



Max heap

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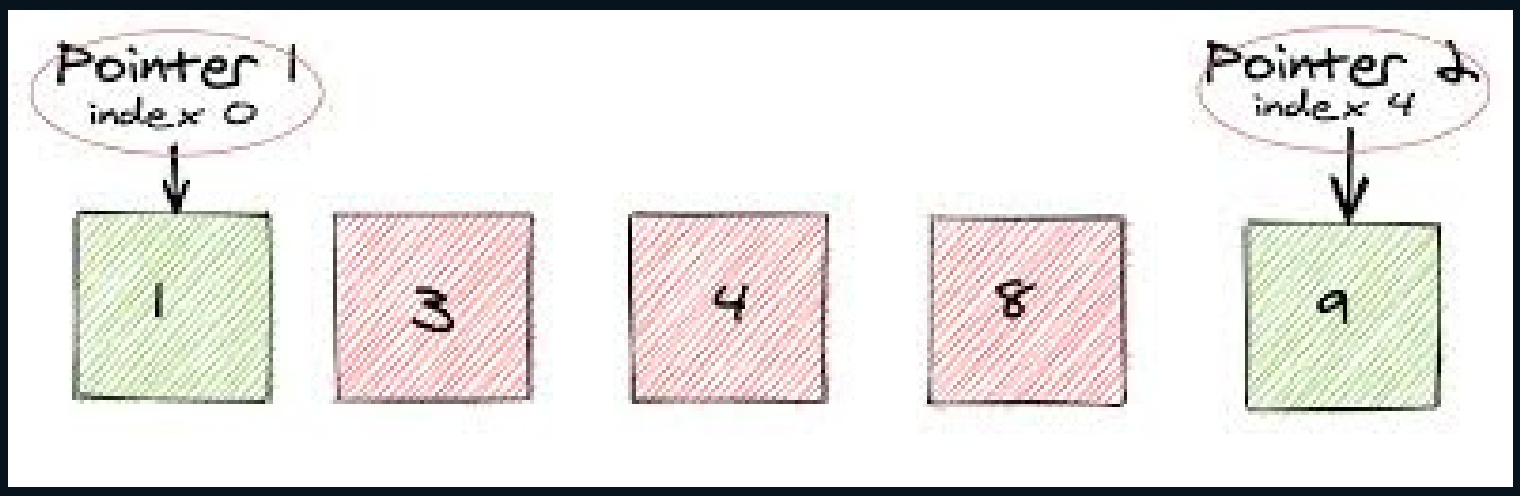
SWIPE

Two Pointers

- Merse sort algorithm
- Binary search



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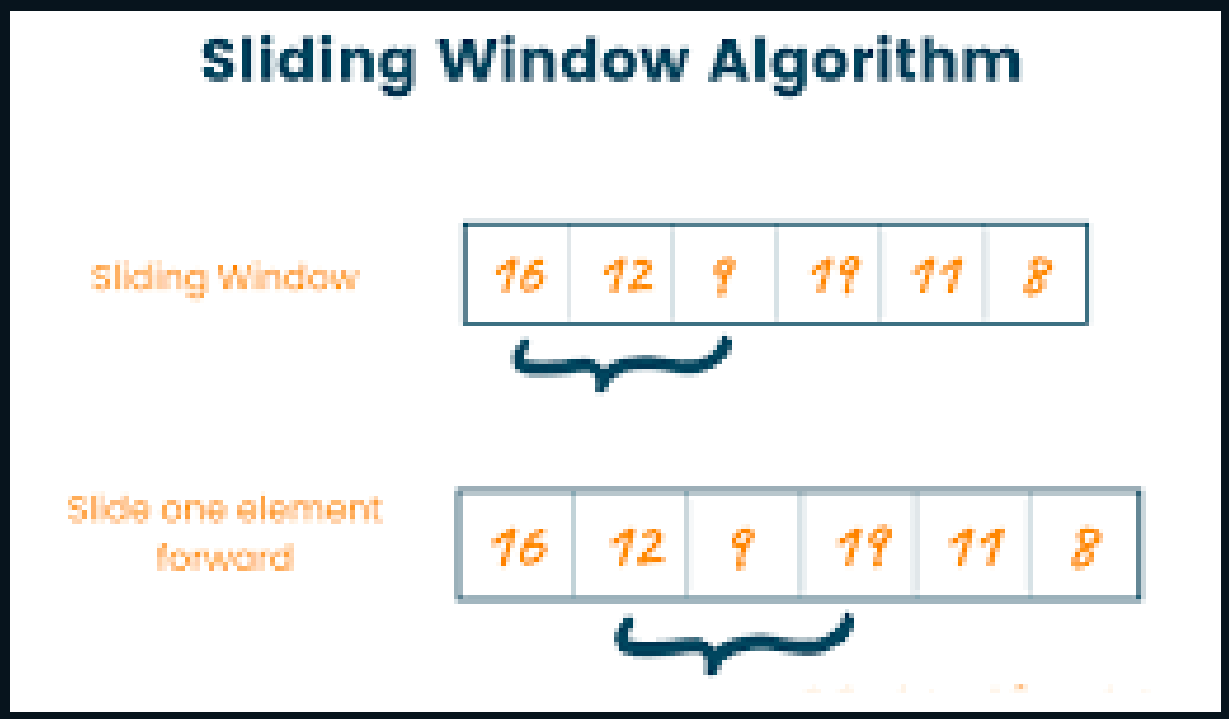
SWIPE →

Sliding Window

- Network congestion control algorithm (like TCP).
- Data compression algorithm



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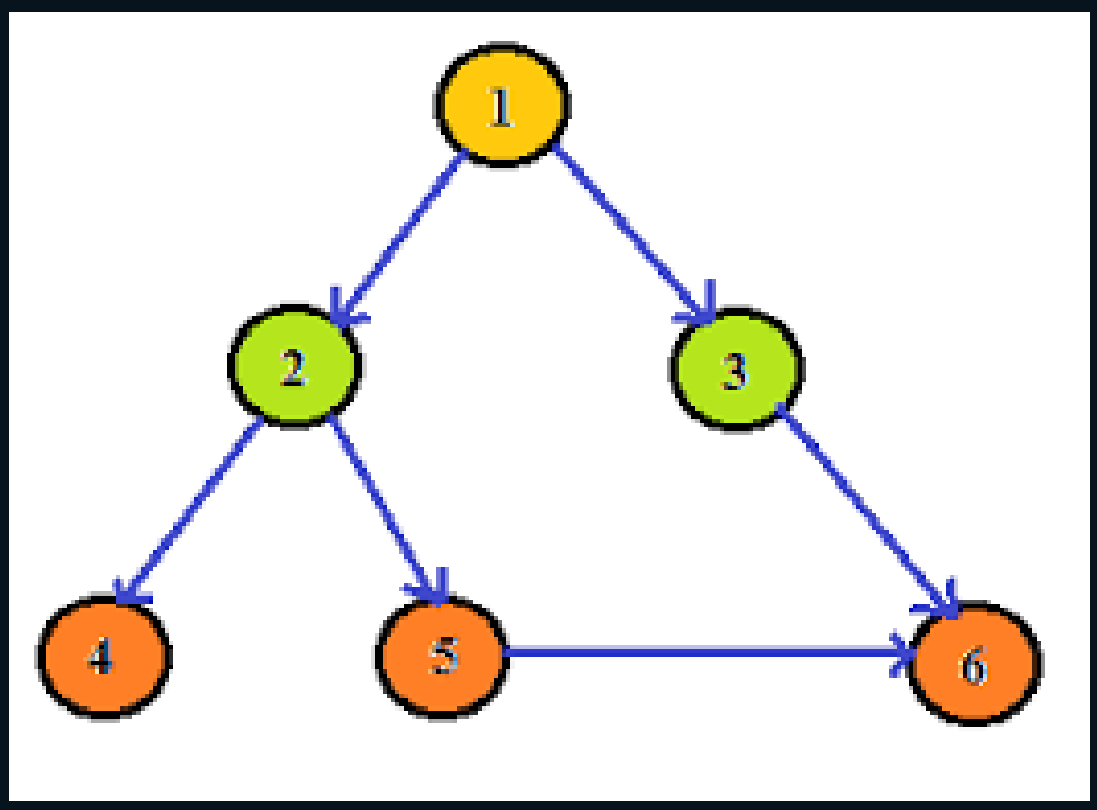
SWIPE →

Depth-First Search (DFS)

- Finding connected components in a graph.
- Generating permutation and combination.



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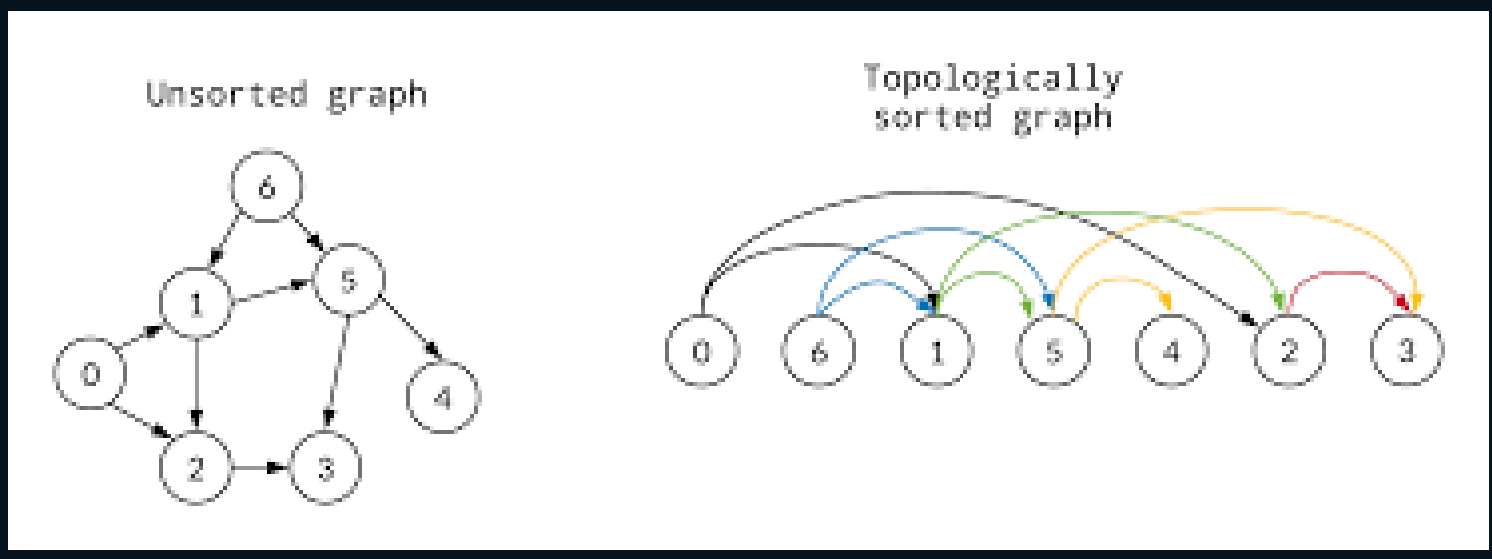
SWIPE →

Topological sort

- Scheduling tasks with dependencies.
- Determining the order of compilation for a set of sorce files.



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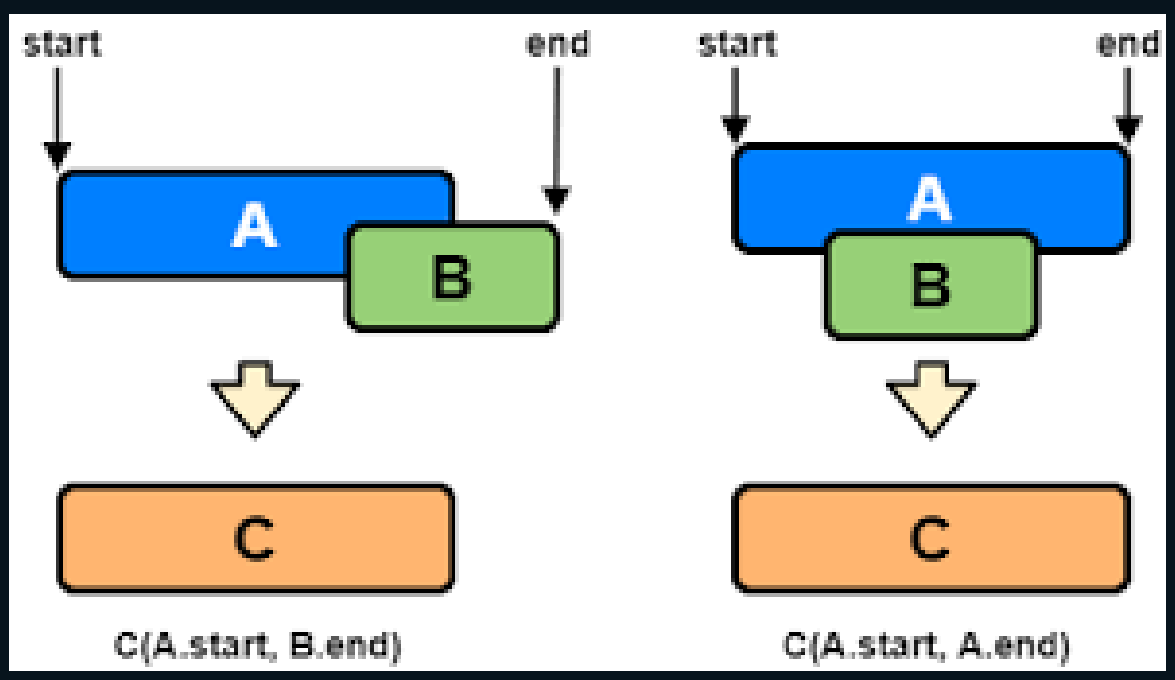
SWIPE →

Merge Interval

- Scheduling meeting rooms.
- Managing calender events.



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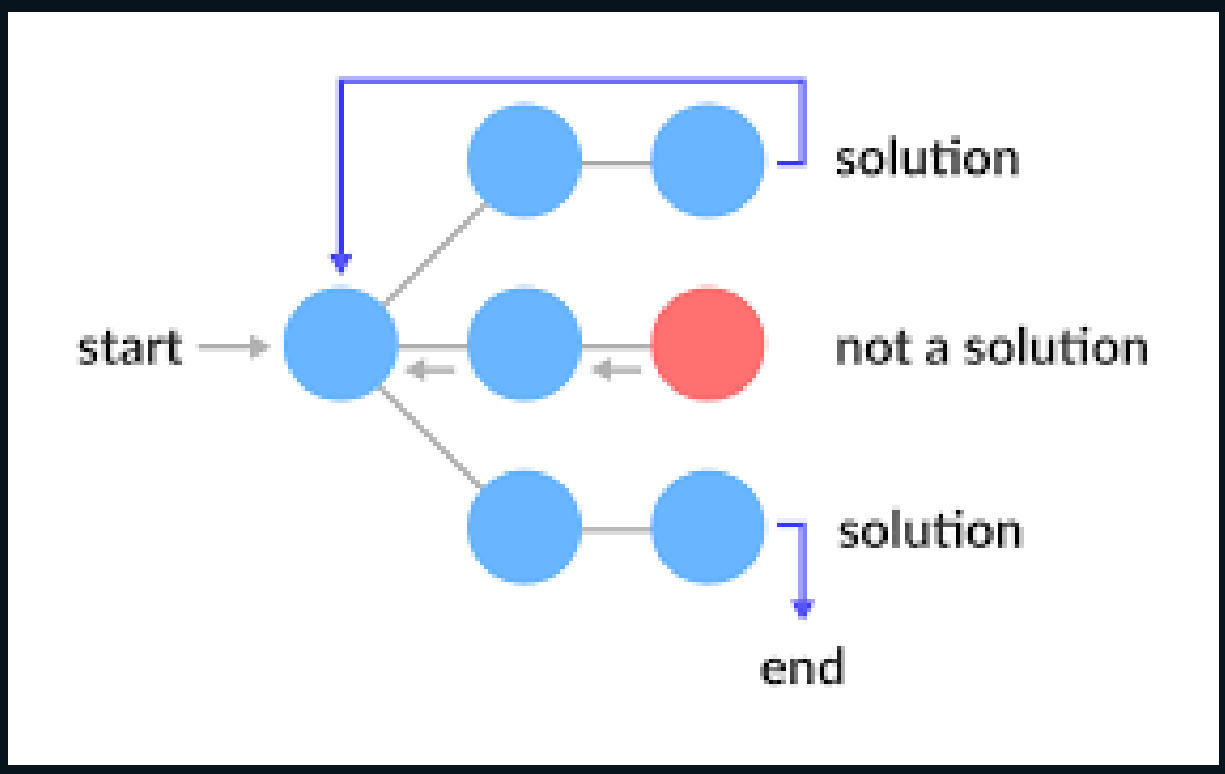
SWIPE →

Backtracking

- Solving Sudoko puzzles.
- Generating permutation and combination.



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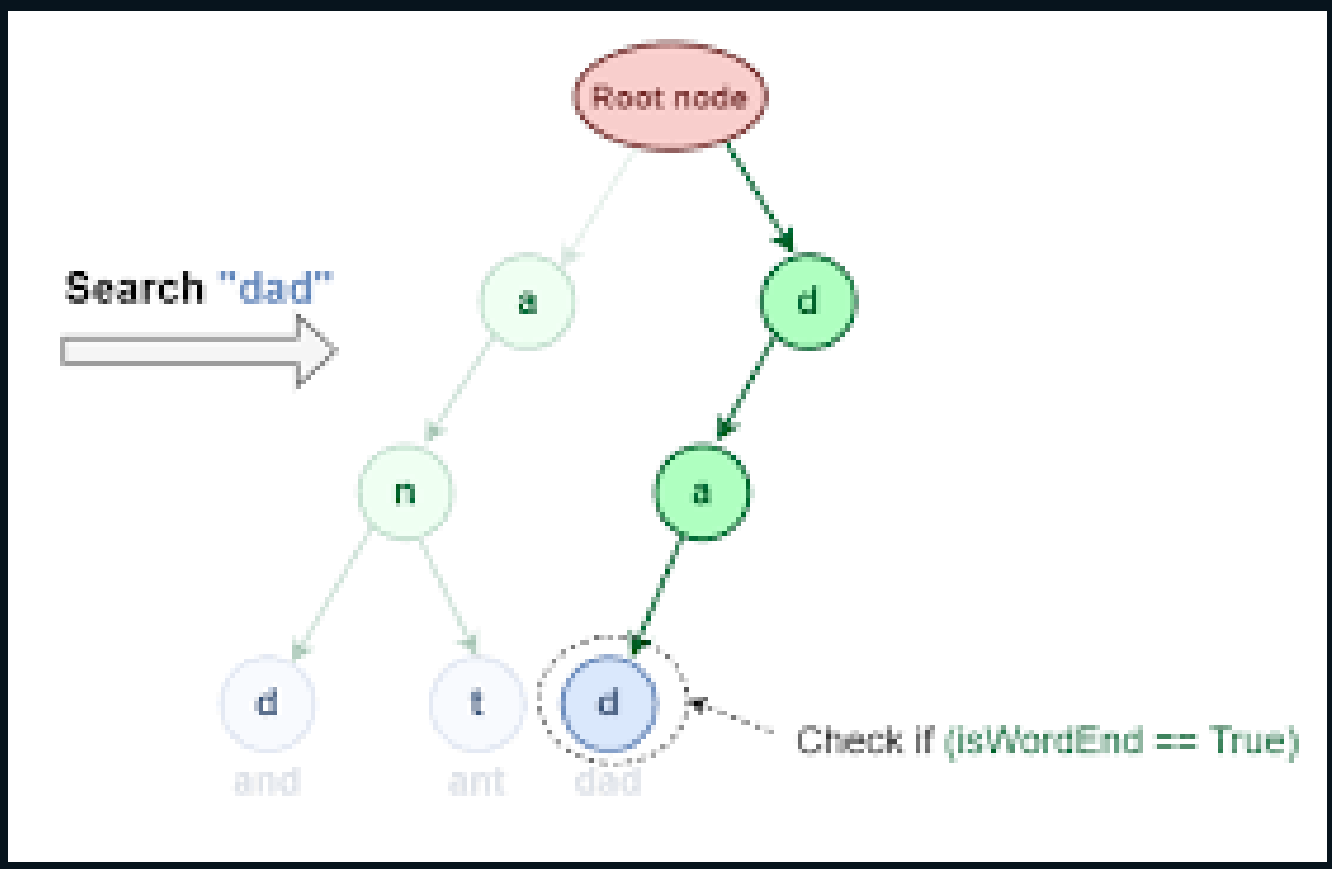
SWIPE →

Tries
(Prefix Tree)

- Spell checker
- Implementing an autocomplete system



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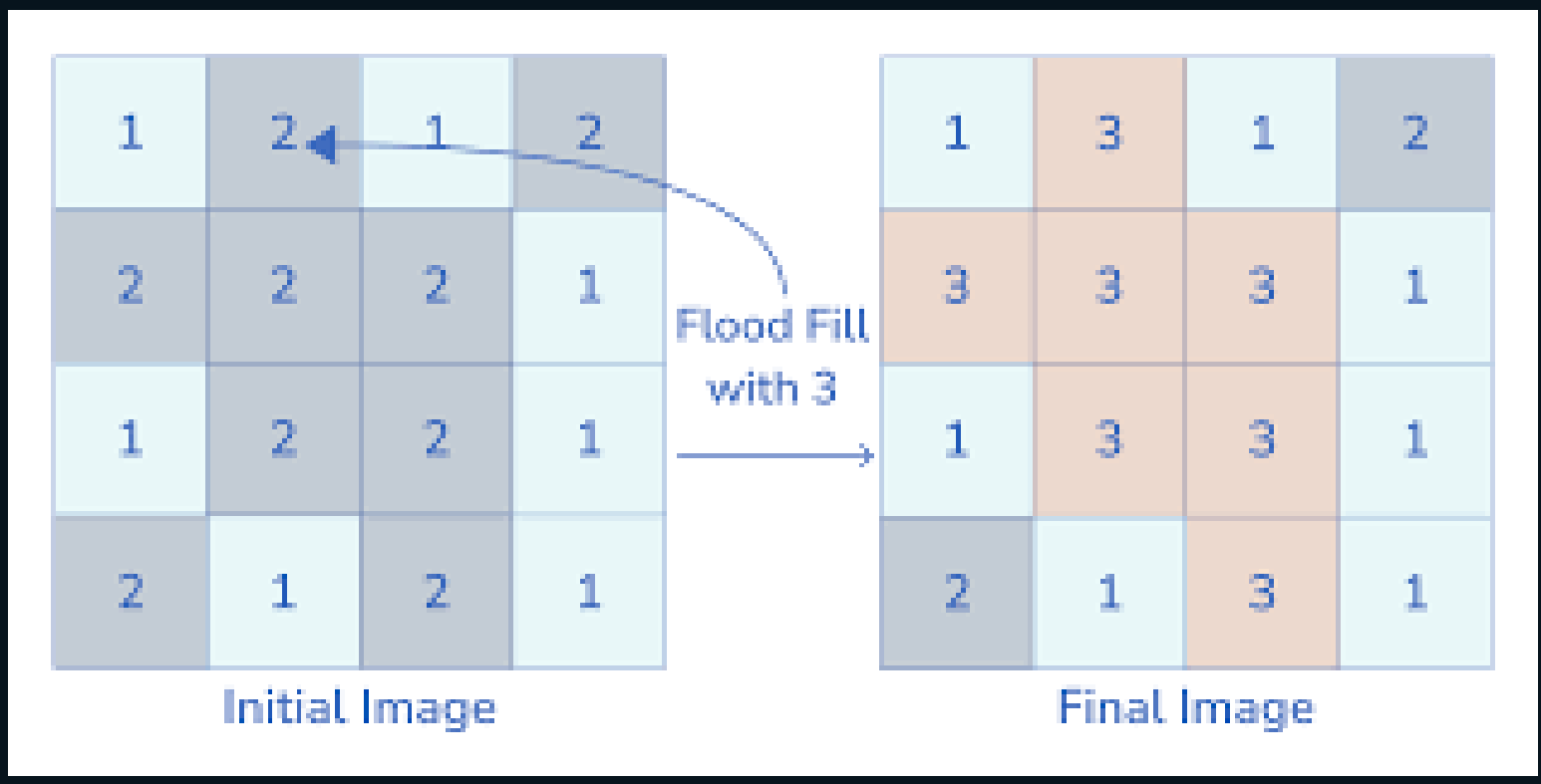
SWIPE →

Flood Fill

- Filing a bound area in a graphics editor (like MS paint).
- Counting connected regions in a 2D grid.



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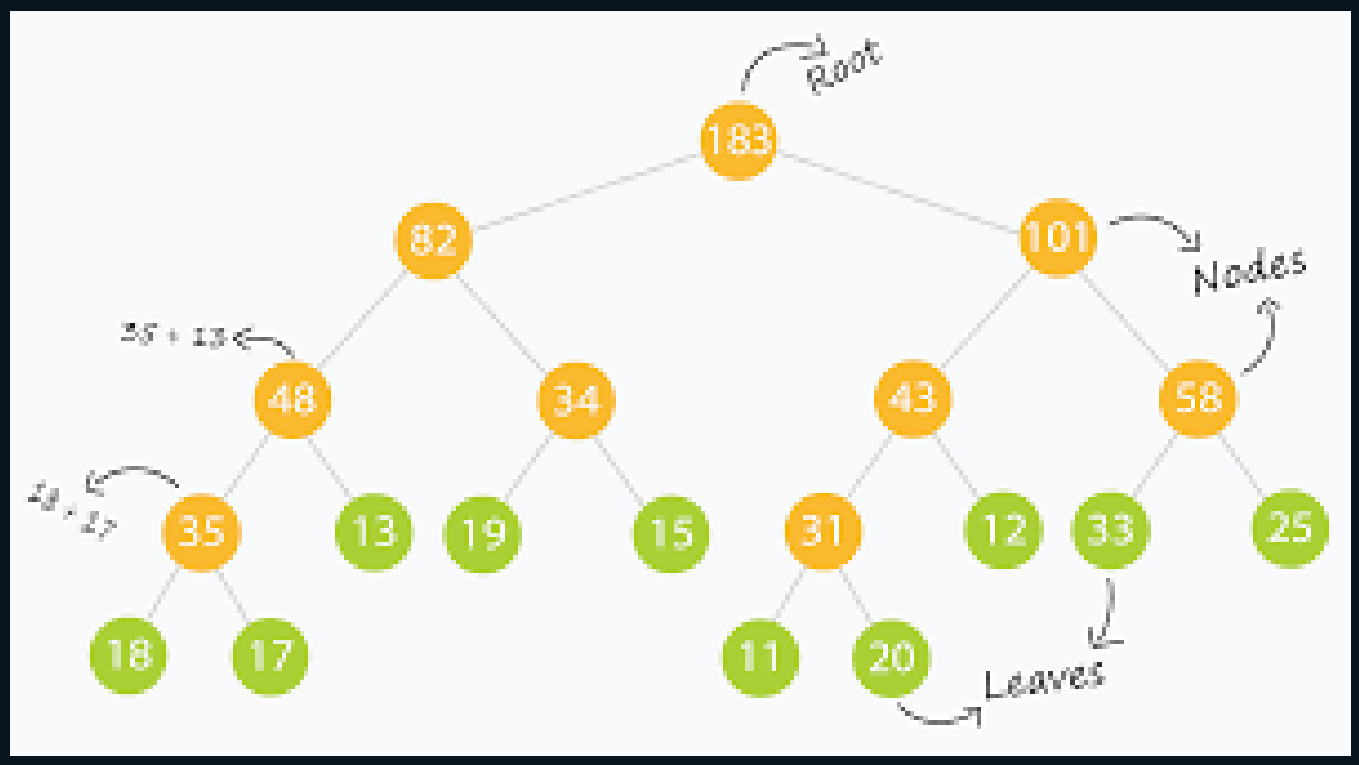
SWIPE →

Segment Tree

- Range queries in databases
- Calculating range-based statistics.



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SWIPE

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