

DATA STRUCTURE AND ALGORITHM

ASSIGNMENT 3

REFLECTIONS

Reflection stack: Why stack is not suitable for customer queues?

Stacks follow LIFO, meaning the last customer added would be served first, which violates fairness principles in customer service scenarios where the first arriver should be served first. This could lead to dissatisfaction and inefficiency in real-world queues like banks or hospitals, as it prioritizes newcomers over those who have waited longer. Queues (FIFO) are better suited for such cases to maintain order and equity.

Reflection on queue: Why FIFO ensures order in restaurants?

FIFO maintains the sequence of customer arrivals, ensuring that orders are prepared and served in the order they were received. This promotes fairness, reduces wait time complaints, and optimizes workflow by preventing backlog on older requests. In restaurants, it aligns with customer expectations of equitable service, avoiding scenarios where late arrivals are prioritized, which could lead to dissatisfaction or chaos.