

DATA STRUCTURE –EXERCISE N° 4

Stack questions :

Q4. Reflection questions :

Why stack doesn't work for queues in hospitals ?

Stacks follow **LIFO (Last in First Out)**, meaning the last person to arrive is served first. In hospitals, this is unfair and impractical patients should be served in the order they arrive or based on urgency. That's why queues (**FIFO**) are preferred : they ensure fairness and proper prioritization.

Queues questions :

Q3. In distributing the exams, queue is most effective and popular than stack.

Queue works better because it ensures **FIFO**—students receive papers in the order they're seated or arrived. A stack would reverse the order, causing confusion and unfairness. Queues maintain order and fairness, which is essential in exams.

Q4. Why FIFO ensures fairness in exams?

FIFO (First In, First Out) ensures that students are treated equally and receive materials in the order they arrived or are seated. It prevents bias, confusion, and disorder. In exams, fairness is critical—**FIFO** supports that by maintaining a predictable and just distribution process.

END.