**Why FIFO ensures fair registration process?**

**FIFO (First In, First Out)**

* **Definition:** The first person to enter the queue is the first person to be served.
* **How it works in registration:**
  1. Students arrive and join the queue in the order they reach the registration desk.
  2. The registration system serves them **one by one, starting from the front**.
  3. No student can jump ahead of someone who arrived earlier.

**Why it’s fair**

1. **Respects arrival order:** The students who came first are served first.
2. **Prevents cutting the line:** No one can register before those already waiting.
3. **Transparent and predictable:** Everyone knows their turn based on when they arrived.
4. **Efficient for large groups:** Keeps the process orderly, avoiding confusion.

Why stack represents last action undone first?

**Stack (LIFO – Last In, First Out)**

* **Definition:** A stack is a data structure where the **last item added (pushed) is the first item removed (popped)**.
* This is why stacks follow **LIFO** (Last In, First Out).

**Why “last action undone first”?**

**Stacks store actions in order of execution.**

* + Example: In a text editor, you type “A”, then “B”, then “C”.
  + Stack of actions: [A, B, C] (bottom → top).

**Undo removes the top action first.**

* + When you press **undo**, it removes the **most recent action** (“C”) first.
  + Then the next undo removes the previous action (“B”).

1. **Practical reasoning:**
   * You usually want to **reverse the most recent change first**, not the oldest.
   * This matches **how humans think about undoing mistakes**.