STACK QWESTION

Challenge: Reverse "RUBAVU" using stack.

- **Push each letter**: R → U → B → A → V → U
- **Pop all**: U → V → A → B → U → R
- **Reversed**: `"UVABUR"`

• Reflection: Why stack structure is simple yet powerful?

- **Simplicity**: Only two operations – push and pop
- **Power**:
    - Manages function calls (call stack)
    - Supports undo/redo in apps
    - Helps in parsing expressions and syntax
    - Enables depth-first search in algorithms
- **Analogy**: Like a pile of plates – you take the top one first

Qweve qwestion

• Challenge: Model ticketing queue for Kigali Arena. Why not stack?

- **Model**: Use a queue → First come, first served
- **Why not stack**:

- Stack serves last person first (LIFO) – unfair!
- Queue ensures fairness and order (FIFO)
- Real-world ticketing must respect arrival time

• Reflection: Why FIFO matches fairness principle in events?

- **Fairness**:
    - Everyone gets served in the order they arrive
    - Prevents jumping the line
    - Encourages discipline and trust in the system