DATA STRUCTURE -BIT-EXERCISE NO:4

Instructions:

1. *For the first two questions (practical tasks), provide the complete code and include their outputs in a screenshot-style format.*
2. *For the challenge questions, design the solution in a clear algorithmic sequence and explain each step alongside the corresponding code lines.*
3. *For the final reflection questions, focus on theoretical discussion only, no code or screenshots are required.*

Project 1

Stack Questions:

- Practical (Rwanda): In UR Canvas, simulate a student opening modules one by one and pressing "Back" twice. Which module is visible last?
- Practical (Rwanda): In BK Mobile app, push ["School Fees", "Airtime", "Electricity Bill"] into a stack. Show undo order after pops.
- Challenge: Create a stack-based algorithm to reverse the proverb *"It always looks green on the other side"*. Why is LIFO suitable here?
- Reflection: Why would replacing stack with queue break the undo functionality in Canvas or BK Mobile?

Queue Questions:

- Practical (Rwanda): At an RRA tax office, model people joining a queue to pay taxes. Show the state after 3 arrivals and 1 service.
- Practical (Rwanda): At MTN service center, simulate 4 SIM replacement requests in FIFO order. Who is served first?
- Challenge: Design a queue-based ticketing system for Amahoro stadium entry. What problems occur if a stack is used instead?
- Reflection: Why is FIFO the fairest approach in real-life services such as banks or hospitals?

Project 2

Stack Questions:

- Practical (Rwanda): During ICT exams, a student pushes ["Q1 Answer", "Q2 Answer", "Q3 Answer"] into a stack. After undoing 2 answers, what remains?
- Practical (Rwanda): In Irembo registration, each form field is pushed to a stack. If the last field is popped due to an error, what fields remain?
- Challenge: Push steps ["Login", "Enter Password", "Confirm"] into a stack, then pop once and push "Reset Password". What is on top?
- Reflection: Why is stack structure more suitable for browser "Back" button than a queue?

Queue Questions:

- Practical (Rwanda): At BK ATM, simulate 5 clients joining the line. After 2 are served, who remains at the front?
- Practical (Rwanda): At Nyabugogo bus terminal, enqueue 4 buses. If 2 depart, which bus is next to leave?
- Challenge: Model Nyabugogo buses using a circular queue where buses return after trips. How is this more realistic than a linear queue?
- Reflection: Why does queue ensure fairness in government services like RSSB pension processing?

Project 3

Stack Questions:

- Practical (Rwanda): In a MoMo Pay transaction, push ["Enter Amount", "Enter PIN", "Confirm"]. Pop once to cancel. Which step remains at top?
- Practical (Rwanda): A student records revision topics: push ["Math", "English", "ICT"]. Pop once and push "Biology". What is the current top?
- Challenge: Show how a stack can validate balanced brackets for (2+3)*(4-1).
- Reflection: Why do many apps use stacks for undo features instead of queues?

Queue Questions:

- Practical (Rwanda): In a UR library, students queue to borrow books. After 3 join and 1 is served, who remains at the front?
- Practical (Rwanda): At Airtel service center, 6 customers request SIM swaps. Who will be the 2nd served?
- Challenge: Compare performance of linear vs circular queue in a bus ticketing system. Which is more efficient?

- Reflection: Why do queues better model fairness in everyday Rwanda services like banking and transport?

Project 4

Stack Questions:

- Practical (Rwanda): Push ["Register Course", "Upload Assignment", "Submit Quiz"] in UR Canvas stack. Pop twice. Which action remains?
- Practical (Rwanda): In BK mobile banking, simulate stack for ["Deposit", "Transfer", "Pay Bills"]. Undo last action.
- Challenge: Explain how a stack can reverse the order of names: ["Eric", "Alice", "Jean"].
- Reflection: Why can't a queue be used for reversing words in a sentence?

Queue Questions:

- Practical (Rwanda): At CHUK pharmacy, 5 patients queue for medicine. After 3 are served, who remains at the front?
- Practical (Rwanda): At Nyabugogo, 4 buses are enqueued for trips. After 1 departs, which is next?
- Challenge: Create a queue system for UR cafeteria where orders are prepared in arrival order. What goes wrong if a stack is used?
- Reflection: Why is a queue appropriate for handling service requests in customer support centers?

Project 5

Stack Questions:

- Practical (Rwanda): A MoMo app pushes ["Enter PIN", "Select Service", "Confirm Payment"]. Undo last two. What step remains?
- Practical (Rwanda): In UR exams, students push ["Q1", "Q2", "Q3", "Q4"]. If two are popped, which is now top?
- Challenge: Use a stack to reverse the characters of the word "Rwanda".
- Reflection: Why is LIFO not suitable for customer service scenarios?

Queue Questions:

- Practical (Rwanda): At an RSSB office, 4 clients arrive for pension services. After 2 are served, who is next?

- Practical (Rwanda): In a Kigali restaurant, 5 food orders are queued. Who gets served third?
- Challenge: Design a priority queue for hospital emergencies. Explain why this is better than a simple queue.
- Reflection: Why is fairness important in queues for public services?

Project 6

Stack Questions:

- Practical (Rwanda): A UR student pushes ["Open Email", "Download File", "Submit Assignment"]. Undo twice. What remains?
- Practical (Rwanda): In BK banking, push ["Check Balance", "Deposit", "Withdraw"]. Pop once. Which action is undone?
- Challenge: Push ["A", "B", "C"], pop one, push "D". What is the stack content step by step?
- Reflection: Why is stack useful for solving mathematical expressions?

Queue Questions:

- Practical (Rwanda): At a RURA office, 3 citizens join a queue for license renewal. After 1 is served, who is next?
- Practical (Rwanda): At Airtel office, simulate 5 customers for SIM replacement in FIFO. Who is served last?
- Challenge: Compare how a queue vs stack would handle students boarding a bus.
- Reflection: Why is queue discipline necessary in government offices?

Project 7

Stack Questions:

- Practical (Rwanda): In Irembo application, push ["Step1: Fill Name", "Step2: Fill Address", "Step3: Confirm"]. Undo last. What step is current?
- Practical (Rwanda): In UR labs, a student pushes ["Experiment1", "Experiment2", "Experiment3"]. Pop two. Which is left?
- Challenge: Create a stack model to track browser history for UR student portal.
- Reflection: Why can stack store temporary actions effectively?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, simulate a queue of 6 buses. After 3 depart, who is at the front?
- Practical (Rwanda): At BK ATM, 4 customers queue. After 1 withdrawal, who is next?
- Challenge: Implement queue to handle playlist of 5 songs in order. What breaks if stack is used instead?
- Reflection: Why is queue the natural choice for playlist or task scheduling?

Project 8

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Dial Code", "Enter PIN", "Select Service"]. Undo last two. Which remains?
- Practical (Rwanda): UR student pushes ["Assignment", "Revision", "Group Work"]. Pop once. What is on top?
- Challenge: Reverse the list ["Banana", "Apple", "Mango"] using stack.
- Reflection: Why does stack represent "last action first undone"?

Queue Questions:

- Practical (Rwanda): At RSSB, simulate 5 pension applicants joining queue. Serve 2. Who is next?
- Practical (Rwanda): In CHUK hospital, 4 patients enqueue. After 1 is served, who remains?
- Challenge: Design a circular queue for 3 moto taxis operating from same stage.
- Reflection: Why does FIFO model fairness in healthcare?

Project 9

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Upload ID", "Fill Form", "Confirm"]. Pop once. Which field is undone?
- Practical (Rwanda): UR exam pushes ["Answer1", "Answer2", "Answer3"]. Pop all. Which remains at end?
- Challenge: Show stack growth and shrink for 4 push and 2 pop operations.
- Reflection: Why is stack efficient for temporary storage?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, enqueue 4 buses. If 2 depart, which is front?
- Practical (Rwanda): At BK ATM, simulate 6 customers. Who is served second?
- Challenge: Explain how a priority queue works for emergencies at CHUK.
- Reflection: Why is fairness important in banking queues?

Project 10

Stack Questions:

- Practical (Rwanda): In MoMo Pay, push ["Enter Amount", "Enter PIN", "Confirm Payment"]. Undo last. Which step is left?
- Practical (Rwanda): UR student pushes ["Lecture Notes", "Practice Questions", "Mock Exam"]. Pop two. Which is on top?
- Challenge: Reverse the characters of "RWANDA" using a stack.
- Reflection: Why can't queue undo actions effectively?

Queue Questions:

- Practical (Rwanda): At Airtel service center, 5 customers queue. After 3 are served, who is next?
- Practical (Rwanda): In RRA office, 4 citizens enqueue for tax payment. After 2 are served, who remains?
- Challenge: Model a restaurant order queue where customers are served in order. What breaks if stack is used?
- Reflection: Why does FIFO order make sense for customer satisfaction?

Project 11

Stack Questions:

- Practical (Rwanda): In BK Mobile, push ["Deposit", "Transfer", "Pay Bills"] into a stack. Pop once. Which transaction is undone?
- Practical (Rwanda): UR student pushes ["Read Notes", "Do Exercises", "Revise Past Papers"]. Pop twice. What remains?
- Challenge: Demonstrate stack behavior by pushing ["Task1", "Task2", "Task3"], then popping one and adding "Task4".
- Reflection: Why does LIFO ordering make sense for undoing mistakes in apps?

Queue Questions:

- Practical (Rwanda): At Nyabugogo bus park, 7 buses join a queue. If 3 depart, who is now in front?
- Practical (Rwanda): At CHUK, 5 patients wait for consultation. Who is served second?
- Challenge: Compare queue vs stack for modeling customers lining up at a restaurant. Which is correct and why?
- Reflection: Why is FIFO necessary in government service offices like RRA?

Project 12

Stack Questions:

- Practical (Rwanda): MoMo transaction steps are ["Dial Code", "Enter PIN", "Confirm"]. If the last step is popped, what is left?
- Practical (Rwanda): UR student pushes ["Register Course", "Pay Fees", "Get Transcript"]. Undo last action. What is the top?
- Challenge: Reverse the string "AFRICA" using stack operations.
- Reflection: Why would a queue fail for reversing names in a list?

Queue Questions:

- Practical (Rwanda): At RSSB office, 6 applicants queue for pension queries. After 2 are served, who is next?
- Practical (Rwanda): In Airtel shop, 4 customers queue for SIM registration. Who is served first?
- Challenge: Design a queue system for Kigali Arena ticket sales. What problems occur if stack is used?
- Reflection: Why does queue ordering improve fairness in customer service centers?

Project 13

Stack Questions:

- Practical (Rwanda): UR exam system pushes answers ["Answer1", "Answer2", "Answer3"]. After 2 pops, what is left?
- Practical (Rwanda): MoMo app pushes ["Select Service", "Enter Amount", "Confirm"]. Pop once. Which is undone?
- Challenge: Use stack operations to check if [(2+3) – (4+5)] is balanced.

- Reflection: Why is stack suitable for temporary storage in problem-solving?

Queue Questions:

- Practical (Rwanda): In Nyabugogo terminal, 5 buses line up. After 1 departs, which is at front?
- Practical (Rwanda): At BK ATM, 3 customers join queue. After 1 withdrawal, who is next?
- Challenge: Compare efficiency of linear vs circular queue for rotating buses in Kigali.
- Reflection: Why is FIFO critical in hospitals for non-emergency patients?

Project 14

Stack Questions:

- Practical (Rwanda): A UR student pushes ["Open Portal", "Check Grades", "Download Transcript"]. Undo last action. What is left?
- Practical (Rwanda): In MoMo Pay, push ["Select Merchant", "Enter Amount", "Confirm Payment"]. Pop twice. Which step remains?
- Challenge: Show how stack can reverse order of list ["Kigali", "Musanze", "Huye"].
- Reflection: Why does stack fit undo but not serving customers?

Queue Questions:

- Practical (Rwanda): In CHUK pharmacy, 8 patients join queue. After 4 are served, who is in front?
- Practical (Rwanda): At Airtel, 5 clients wait for phone repairs. Who is served first?
- Challenge: Create a queue model for UR library book requests. What issue arises if stack is used instead?
- Reflection: Why is queue necessary in service environments with multiple clients?

Project 15

Stack Questions:

- Practical (Rwanda): MoMo stack: push ["Enter Code", "Enter PIN", "Confirm"]. Pop last step. What is left?

- Practical (Rwanda): UR pushes ["Attend Class", "Write Assignment", "Sit Exam"]. Undo two. What is left?
- Challenge: Push ["X", "Y", "Z"], pop twice, then push "W". What is top now?
- Reflection: Why is stack not good for serving people in order?

Queue Questions:

- Practical (Rwanda): At RRA office, 4 people join queue. After 2 are served, who is front?
- Practical (Rwanda): At Nyabugogo, 3 buses enqueue. After 1 departs, which bus is next?
- Challenge: Build a queue system for a small clinic. What fairness problem occurs if stack is used?
- Reflection: Why does FIFO better represent fairness than LIFO?

Project 16

Stack Questions:

- Practical (Rwanda): UR student pushes ["Open Email", "Type Message", "Send"]. Undo last. Which is left?
- Practical (Rwanda): MoMo stack stores ["Select Service", "Enter Number", "Confirm"]. Pop one. Which remains?
- Challenge: Show how stack reverses the word "DATA".
- Reflection: Why is stack good for temporary undo but not queues?

Queue Questions:

- Practical (Rwanda): At Airtel shop, 7 clients join for SIM swap. After 3 are served, who is next?
- Practical (Rwanda): In Kigali restaurant, 5 customers queue for orders. Who is served last?
- Challenge: Implement a priority queue for CHUK emergency patients. Why is this better than simple FIFO?
- Reflection: Why is FIFO essential for service fairness?

Project 17

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Fill Name", "Fill Address", "Confirm"]. Pop last. Which is undone?
- Practical (Rwanda): UR student pushes ["Math", "English", "ICT"]. Pop one. Which is top now?
- Challenge: Reverse the string "QUEUE" using stack.
- Reflection: Why stack naturally models undo operations?

Queue Questions:

- Practical (Rwanda): At RRA, 5 people queue. After 2 are served, who is next?
- Practical (Rwanda): At BK ATM, 6 clients join. Who is served third?
- Challenge: Design a circular queue for 4 buses looping from Nyabugogo. Why circular instead of linear?
- Reflection: Why does queue reflect "first come, first served" better than stack?

Project 18

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Enter PIN", "Enter Amount", "Confirm"]. Pop twice. What is left?
- Practical (Rwanda): UR pushes ["Start Exam", "Answer Q1", "Answer Q2"]. Undo one. Which remains on top?
- Challenge: Show push/pop sequence for ["A", "B", "C", "D"] with 2 pops.
- Reflection: Why does stack preserve most recent activity?

Queue Questions:

- Practical (Rwanda): In RSSB office, 7 applicants queue. After 4 are served, who is in front?
- Practical (Rwanda): In Airtel, 5 clients queue. Who is served second?
- Challenge: Queue vs stack: which models a line of voters at polling station correctly? Explain.
- Reflection: Why FIFO is linked with fairness in elections or services?

Project 19

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Login", "Open Module", "Start Quiz"]. Pop one. Which is undone?
- Practical (Rwanda): UR student pushes ["Assignment", "Presentation", "Exam Prep"]. Pop two. What remains?
- Challenge: Reverse list ["One", "Two", "Three", "Four"] using stack.
- Reflection: Why stack can't manage first-come-first-serve processes?

Queue Questions:

- Practical (Rwanda): In RRA tax queue, 6 people arrive. After 3 served, who is in front?
- Practical (Rwanda): At Nyabugogo, 5 buses enqueue. Who is served first?
- Challenge: Create queue model for food orders at restaurant. What fails if stack is used?
- Reflection: Why FIFO increases customer satisfaction?

Project 20

Stack Questions:

- Practical (Rwanda): In MoMo app, push ["Dial Code", "Enter PIN", "Select Service"]. Pop last. Which step is undone?
- Practical (Rwanda): UR student pushes ["Revise Notes", "Group Work", "Mock Exam"]. Pop two. Which is top?
- Challenge: Show push/pop trace for ["Task1", "Task2", "Task3", "Task4"] with 2 pops and 1 new push.
- Reflection: Why stack fits undo better than redo functions?

Queue Questions:

- Practical (Rwanda): At CHUK, 5 patients enqueue. After 1 is served, who is in front?
- Practical (Rwanda): At Airtel, 3 clients wait for SIM replacement. Who is served last?
- Challenge: Design queue system for Kigali Arena concert entry. Why not stack?
- Reflection: Why FIFO ensures orderliness in mass events?

Project 21

Stack Questions:

- Practical (Rwanda): In UR Portal, push ["Login", "View Grades", "Download Transcript"]. Undo twice. Which action remains?
- Practical (Rwanda): MoMo Pay stack: ["Enter Amount", "Enter PIN", "Confirm"]. Pop one. What is left?
- Challenge: Push ["X", "Y", "Z"], pop once, push "W". What is the new top?
- Reflection: Why does stack fit best for undoing financial transactions?

Queue Questions:

- Practical (Rwanda): At BK ATM, 4 people join. After 2 withdrawals, who is in front?
- Practical (Rwanda): At Nyabugogo, 6 buses queue. After 3 depart, which bus is next?
- Challenge: Model a voting line at a polling station using queue. Why not stack?
- Reflection: Why FIFO ensures trust in public systems like elections?

Project 22

Stack Questions:

- Practical (Rwanda): UR pushes ["Lecture1", "Lecture2", "Lecture3"]. Pop one. Which lecture is top now?
- Practical (Rwanda): In Irembo, push ["Upload ID", "Fill Address", "Confirm"]. Undo last. What fields remain?
- Challenge: Reverse the word "KINSHASA" using stack.
- Reflection: Why would stack cause unfairness if used in banks?

Queue Questions:

- Practical (Rwanda): At Airtel, 5 clients join queue. Who is served first?
- Practical (Rwanda): At CHUK pharmacy, 7 patients join queue. After 2 served, who is in front?
- Challenge: Design circular queue for 3 buses looping Kigali–Musanze route. Why is circular queue useful?
- Reflection: Why FIFO ensures equality in service delivery?

Project 23

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "Enter PIN", "Confirm"]. Undo twice. Which step remains?
- Practical (Rwanda): UR student pushes ["Assignment", "Revision", "Group Work"]. Pop two. Which is left?
- Challenge: Push ["1", "2", "3", "4"], pop twice, push "5". Show top after operations.
- Reflection: Why does stack reflect "last action undone first"?

Queue Questions:

- Practical (Rwanda): At RRA, 6 people join. After 1 is served, who is next?
- Practical (Rwanda): At BK ATM, 4 customers enqueue. After 2 are served, who is in front?
- Challenge: Compare stack vs queue for restaurant orders. Which is correct?
- Reflection: Why is FIFO essential in health services like CHUK?

Project 24

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Pop once. Which is left?
- Practical (Rwanda): UR exam pushes ["Q1", "Q2", "Q3"]. Undo 2. Which remains?
- Challenge: Reverse string "URDATA" using stack.
- Reflection: Why stack cannot handle customers waiting in order?

Queue Questions:

- Practical (Rwanda): In RSSB, 5 applicants join. After 3 are served, who is in front?
- Practical (Rwanda): At Airtel, 7 clients wait. Who is served third?
- Challenge: Build queue for Kigali Stadium entry. What fails if stack is used?
- Reflection: Why FIFO matches fairness principle in events?

Project 25

Stack Questions:

- Practical (Rwanda): MoMo Pay pushes ["Select Service", "Enter Amount", "Confirm"]. Pop one. Which step is undone?
- Practical (Rwanda): UR student pushes ["Note1", "Note2", "Note3"]. Pop twice. Which note is left?
- Challenge: Push ["A", "B", "C"], pop once, push "D". Show final top.
- Reflection: Why is stack ideal for undo history but not queue tasks?

Queue Questions:

- Practical (Rwanda): At RRA office, 8 citizens join. After 4 served, who is in front?
- Practical (Rwanda): At Nyabugogo, 5 buses queue. Which departs first?
- Challenge: Create a priority queue for CHUK emergencies. Why better than simple queue?
- Reflection: Why FIFO prevents chaos in offices like RRA?

Project 26

Stack Questions:

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Undo last. Which is on top?
- Practical (Rwanda): In Irembo, push ["Enter Details", "Upload Photo", "Confirm"]. Undo twice. Which field remains?
- Challenge: Show stack behavior for ["X", "Y", "Z"] with 2 pops and 1 push "W".
- Reflection: Why does stack naturally support undo actions?

Queue Questions:

- Practical (Rwanda): At BK ATM, 3 clients join. After 1 served, who is next?
- Practical (Rwanda): At Airtel, 6 clients queue. After 2 served, who is front?
- Challenge: Build a queue system for UR cafeteria orders. What goes wrong with stack?
- Reflection: Why FIFO is correct for serving food orders?

Project 27

Stack Questions:

- Practical (Rwanda): MoMo pushes ["PIN", "Amount", "Confirm"]. Undo once. Which step is on top?
- Practical (Rwanda): UR student pushes ["Lab1", "Lab2", "Lab3"]. Pop all. Which remains?
- Challenge: Reverse "QUEUE" using stack.
- Reflection: Why is stack unsuitable for serving patients?

Queue Questions:

- Practical (Rwanda): At RSSB, 5 applicants queue. After 1 is served, who is front?
- Practical (Rwanda): At Nyabugogo, 6 buses queue. Who departs second?
- Challenge: Queue vs stack for book borrowing system. Which is realistic?
- Reflection: Why FIFO preserves fairness in academic services?

Project 28

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Open Module", "View Notes", "Take Quiz"]. Undo once. Which action is removed?
- Practical (Rwanda): UR pushes ["Step1", "Step2", "Step3"]. Pop two. Which step is on top?
- Challenge: Push ["1", "2", "3"], pop 1, push "4". What is top?
- Reflection: Why stack is efficient for reversing lists?

Queue Questions:

- Practical (Rwanda): At RRA office, 4 clients arrive. After 2 served, who is next?
- Practical (Rwanda): In Airtel shop, 5 customers queue. Who is served last?
- Challenge: Build queue model for Nyabugogo buses. Why linear queue may fail?
- Reflection: Why is FIFO better than random serving?

Project 29

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Enter PIN", "Choose Service", "Confirm"]. Undo twice. Which remains?
- Practical (Rwanda): UR student pushes ["Revise1", "Revise2", "Revise3"]. Pop one. Which is left?
- Challenge: Reverse "RWANDA" with stack.
- Reflection: Why stack works for undo but not redo actions?

Queue Questions:

- Practical (Rwanda): At CHUK, 6 patients queue. After 2 served, who is in front?
- Practical (Rwanda): At BK ATM, 5 clients join. Who is served third?
- Challenge: Queue vs stack for handling voter lines. Which is correct?
- Reflection: Why FIFO creates fairness in elections?

Project 30

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Fill Form", "Upload File", "Confirm"]. Pop once. What remains?
- Practical (Rwanda): UR pushes ["Read Book", "Write Notes", "Practice"]. Undo twice. Which is left?
- Challenge: Show stack trace for ["X", "Y", "Z", "W"] with 2 pops.
- Reflection: Why stack supports temporary storage of steps?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 5 depart, which bus is in front?
- Practical (Rwanda): At Airtel, 4 clients queue. After 1 served, who is front?
- Challenge: Build queue for restaurant food orders. What issue arises with stack?
- Reflection: Why FIFO gives fairness in service centers?

Project 31

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Code", "Enter PIN", "Confirm"]. Undo 1. Which remains?
- Practical (Rwanda): UR pushes ["Chapter1", "Chapter2", "Chapter3"]. Pop two. Which is top?
- Challenge: Reverse "AFRICA" using stack.
- Reflection: Why stack helps to backtrack steps?

Queue Questions:

- Practical (Rwanda): At RSSB, 8 people queue. After 4 are served, who is in front?
- Practical (Rwanda): At BK ATM, 6 clients queue. Who is served second?
- Challenge: Queue vs stack for ticket sales at stadium. Which is proper?
- Reflection: Why FIFO promotes fairness in events?

Project 32

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Open Lesson", "Read Notes", "Submit Quiz"]. Undo 2. What is left?
- Practical (Rwanda): MoMo pushes ["Step1", "Step2", "Step3"]. Pop one. Which remains?
- Challenge: Push ["A", "B", "C"], pop all. Which is left?
- Reflection: Why stack is unsuitable for queues in hospitals?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 9 buses join. After 5 depart, who is in front?
- Practical (Rwanda): At Airtel, 4 customers queue. Who is last served?
- Challenge: Compare linear vs circular queue in public transport. Which is efficient?
- Reflection: Why FIFO fits public transport systems?

Project 33

Stack Questions:

- Practical (Rwanda): UR pushes ["Topic1", "Topic2", "Topic3"]. Pop once. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Pop twice. Which remains?
- Challenge: Reverse "STACK" using stack.
- Reflection: Why stack gives last element first?

Queue Questions:

- Practical (Rwanda): At CHUK, 5 patients queue. After 1 served, who is front?
- Practical (Rwanda): At BK ATM, 3 clients queue. Who is served first?
- Challenge: Queue vs stack for playlist order. Which works better?
- Reflection: Why FIFO matches fairness in music playback?

Project 34

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Enter PIN", "Select Service", "Confirm"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["Rev1", "Rev2", "Rev3"]. Pop two. Which is top?
- Challenge: Push ["1", "2", "3", "4"], pop twice, push "5". Show top.
- Reflection: Why stack can't manage fair service lines?

Queue Questions:

- Practical (Rwanda): At RRA, 5 clients queue. After 3 served, who is in front?
- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 2 depart, who is next?
- Challenge: Create circular queue model for 4 buses looping. Why?
- Reflection: Why FIFO ensures fairness in transport?

Project 35

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Fill Form", "Upload Document", "Submit"]. Pop last. Which step undone?
- Practical (Rwanda): UR student pushes ["Study", "Practice", "Exam"]. Undo two. Which remains?

- Challenge: Reverse "QUEUE" using stack.
- Reflection: Why stack provides last step first undo?

Queue Questions:

- Practical (Rwanda): At Airtel, 6 customers queue. After 2 served, who is front?
- Practical (Rwanda): In RSSB, 5 applicants queue. Who is last served?
- Challenge: Queue vs stack for bank services. Why queue is better?
- Reflection: Why FIFO builds trust in financial services?

Project 36

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Step1", "Step2", "Step3"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["Assign1", "Assign2", "Assign3"]. Pop two. Which is left?
- Challenge: Show push/pop sequence for ["X", "Y", "Z"] with 1 pop and 1 push "W".
- Reflection: Why stack models undo/redo efficiently?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 10 buses join. After 6 depart, who is in front?
- Practical (Rwanda): At BK ATM, 8 clients queue. Who is served second?
- Challenge: Queue vs stack for ordering meals. Which is right?
- Reflection: Why FIFO ensures customer happiness?

Project 37

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Start", "Fill Form", "Submit"]. Undo last. What remains?
- Practical (Rwanda): UR pushes ["Lesson1", "Lesson2", "Lesson3"]. Pop two. Which is left?
- Challenge: Reverse "RUBAVU" using stack.
- Reflection: Why stack structure is simple yet powerful?

Queue Questions:

- Practical (Rwanda): At CHUK, 6 patients queue. After 3 served, who is in front?
- Practical (Rwanda): At Airtel, 5 clients queue. Who is second served?
- Challenge: Model ticketing queue for Kigali Arena. Why not stack?
- Reflection: Why FIFO matches fairness principle in events?

Project 38

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Module1", "Module2", "Module3"]. Undo last. Which module is left?
- Practical (Rwanda): MoMo pushes ["PIN", "Amount", "Confirm"]. Undo 2. Which remains?
- Challenge: Push ["A", "B", "C"], pop 1, push "D". What is top?
- Reflection: Why stack cannot manage arrival order?

Queue Questions:

- Practical (Rwanda): At RRA, 7 clients queue. After 4 served, who is next?
- Practical (Rwanda): At Nyabugogo, 6 buses enqueue. Who is last served?
- Challenge: Compare linear and circular queues for transport. Which works best?
- Reflection: Why FIFO ensures fairness for travelers?

Project 39

Stack Questions:

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop all. Which remains?
- Practical (Rwanda): In Irembo, push ["Form1", "Form2", "Form3"]. Pop 1. Which remains?
- Challenge: Reverse "KIGALI" using stack.
- Reflection: Why stack models undo for exams?

Queue Questions:

- Practical (Rwanda): At RSSB, 6 applicants join. After 2 served, who is in front?

- Practical (Rwanda): At Airtel, 7 clients queue. Who is served third?
- Challenge: Queue vs stack for MoMo transactions. Which is fairer?
- Reflection: Why FIFO reduces disputes in services?

Project 40

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Pop 2. Which step remains?
- Practical (Rwanda): UR pushes ["TopicA", "TopicB", "TopicC"]. Undo 1. Which is left?
- Challenge: Push ["1", "2", "3", "4"], pop twice. What remains?
- Reflection: Why stack is unsuitable for queues in daily life?

Queue Questions:

- Practical (Rwanda): At BK ATM, 9 clients queue. After 5 served, who is front?
- Practical (Rwanda): At Nyabugogo, 8 buses enqueue. Who is served second?
- Challenge: Queue vs stack for concert entry. Which works better?
- Reflection: Why FIFO keeps order at public events?

Project 41

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial Code", "Enter PIN", "Confirm"]. Undo last. What step remains?
- Practical (Rwanda): UR student pushes ["Lecture1", "Lecture2", "Lecture3"]. Pop two. Which lecture is on top?
- Challenge: Reverse the string "STACKQUEUE" using stack operations.
- Reflection: Why is stack unsuitable for first-come-first-served services?

Queue Questions:

- Practical (Rwanda): At CHUK, 5 patients join a queue. After 2 are served, who is in front?
- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 3 depart, which bus is next?

- Challenge: Build a queue system for UR library borrowing requests. Why is stack wrong here?
- Reflection: Why FIFO ensures fairness in library systems?

Project 42

Stack Questions:

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop one. Which is top now?
- Practical (Rwanda): In Irembo, push ["Upload ID", "Enter Address", "Confirm"]. Pop once. Which steps remain?
- Challenge: Push ["A", "B", "C"], pop one, push "D". What is top?
- Reflection: Why stack naturally models undo in apps like Irembo?

Queue Questions:

- Practical (Rwanda): At BK ATM, 4 clients queue. After 1 withdrawal, who is next?
- Practical (Rwanda): In RSSB office, 6 applicants queue. After 3 served, who is front?
- Challenge: Compare linear vs circular queues for buses at Nyabugogo. Which is better?
- Reflection: Why FIFO matters for pension processing at RSSB?

Project 43

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Step1: Enter PIN", "Step2: Enter Amount", "Step3: Confirm"]. Undo step 3. What is on top?
- Practical (Rwanda): UR student pushes ["Revise Math", "Revise English", "Revise ICT"]. Pop one. Which remains?
- Challenge: Reverse "RWANDADATA" using stack.
- Reflection: Why stack is efficient for reversing strings but not for serving people?

Queue Questions:

- Practical (Rwanda): At Airtel, 7 customers join a queue. After 2 are served, who is at the front?

- Practical (Rwanda): At Nyabugogo, 5 buses join a line. Which is the first to depart?
- Challenge: Design a queue system for Kigali Arena tickets. Why stack is wrong here?
- Reflection: Why FIFO ensures fairness at events?

Project 44

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Open Notes", "Open Quiz", "Submit Quiz"]. Pop two. Which is left?
- Practical (Rwanda): UR student pushes ["Topic1", "Topic2", "Topic3"]. Undo last action. Which remains on top?
- Challenge: Show stack operations for ["X", "Y", "Z"] with 2 pops.
- Reflection: Why stack helps trace recent actions in apps?

Queue Questions:

- Practical (Rwanda): At RRA office, 6 citizens queue. After 2 are served, who is next?
- Practical (Rwanda): At CHUK, 4 patients enqueue. After 1 is served, who is front?
- Challenge: Create a queue model for restaurant orders. Why stack breaks fairness?
- Reflection: Why FIFO models fairness in food service?

Project 45

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "Enter PIN", "Confirm"]. Pop once. Which is left?
- Practical (Rwanda): UR pushes ["Lab1", "Lab2", "Lab3"]. Pop two. Which remains?
- Challenge: Reverse "KIGALI" using stack.
- Reflection: Why stack is not suitable for queues in banking?

Queue Questions:

- Practical (Rwanda): At BK ATM, 7 clients queue. After 3 served, who is next?

- Practical (Rwanda): In RSSB, 5 applicants queue. Who is last served?
- Challenge: Queue vs stack for pension processing. Which works?
- Reflection: Why FIFO is required in government offices?

Project 46

Stack Questions:

- Practical (Rwanda): UR student pushes ["Read Notes", "Do Practice", "Take Exam"]. Pop two. Which is left?
- Practical (Rwanda): In Irembo, push ["Enter Details", "Upload ID", "Confirm"]. Pop one. Which step remains?
- Challenge: Push ["1", "2", "3"], pop one, push "4". What is top?
- Reflection: Why stack fits undo in online forms?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 8 buses enqueue. After 5 depart, which is front?
- Practical (Rwanda): At Airtel, 4 clients queue. Who is served second?
- Challenge: Queue vs stack for stadium entry. Which is fair?
- Reflection: Why FIFO prevents conflict in queues?

Project 47

Stack Questions:

- Practical (Rwanda): In MoMo Pay, push ["Enter Number", "Enter Amount", "Confirm"]. Pop one. Which remains?
- Practical (Rwanda): UR pushes ["Class1", "Class2", "Class3"]. Pop all. Which remains?
- Challenge: Reverse "DATASTRUCTURE" using stack.
- Reflection: Why stack gives LIFO order?

Queue Questions:

- Practical (Rwanda): At CHUK, 6 patients queue. After 2 are served, who is in front?
- Practical (Rwanda): At BK ATM, 5 clients queue. Who is third served?

- Challenge: Design a circular queue for buses looping from Kigali to Huye. Why circular?
- Reflection: Why FIFO ensures fairness in transport?

Project 48

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Module1", "Module2", "Module3"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["Note1", "Note2", "Note3"]. Pop two. Which is top?
- Challenge: Show stack trace for ["X", "Y", "Z", "W"] with 2 pops.
- Reflection: Why stack is not suitable for customer queues?

Queue Questions:

- Practical (Rwanda): At RRA, 7 citizens queue. After 3 served, who is front?
- Practical (Rwanda): At Airtel, 6 customers queue. Who is last served?
- Challenge: Queue vs stack for food delivery orders. Which is right?
- Reflection: Why FIFO ensures order in restaurants?

Project 49

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Step1", "Step2", "Step3"]. Undo last. Which step remains?
- Practical (Rwanda): UR student pushes ["TopicA", "TopicB", "TopicC"]. Pop two. Which is top?
- Challenge: Reverse "QUEUESTACK" using stack.
- Reflection: Why stack fits undo but not service fairness?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 9 buses enqueue. After 4 depart, who is in front?
- Practical (Rwanda): At BK ATM, 3 clients queue. Who is served second?
- Challenge: Build a queue system for a Kigali concert entry. Why not stack?
- Reflection: Why FIFO matches fairness in events?

Project 50

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Fill Form", "Upload File", "Submit"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["Rev1", "Rev2", "Rev3"]. Pop all. Which remains?
- Challenge: Push ["1", "2", "3"], pop two, push "4". What is top?
- Reflection: Why stack structure makes sense for redo/undo?

Queue Questions:

- Practical (Rwanda): At CHUK, 4 patients queue. After 2 served, who is in front?
- Practical (Rwanda): At Airtel, 8 clients queue. Who is last?
- Challenge: Queue vs stack for managing bank queues. Which is fair?
- Reflection: Why FIFO ensures justice in financial services?

Project 51

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Code", "Enter PIN", "Confirm"]. Pop last. Which remains?
- Practical (Rwanda): UR student pushes ["Exercise1", "Exercise2", "Exercise3"]. Undo one. Which is left?
- Challenge: Reverse "URRWANDA" using stack.
- Reflection: Why stack works for step history but not waiting lines?

Queue Questions:

- Practical (Rwanda): At RRA office, 5 citizens queue. After 1 served, who is in front?
- Practical (Rwanda): At Nyabugogo, 6 buses queue. Who is served second?
- Challenge: Build queue for UR canteen food line. Why stack would fail?
- Reflection: Why FIFO prevents conflicts in food services?

Project 52

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Lesson1", "Lesson2", "Lesson3"]. Undo 2. Which remains?
- Practical (Rwanda): MoMo pushes ["PIN", "Amount", "Confirm"]. Undo 1. Which remains?
- Challenge: Push ["A", "B", "C", "D"], pop 2, push "E". Show top.
- Reflection: Why stack preserves last actions correctly?

Queue Questions:

- Practical (Rwanda): At BK ATM, 9 clients queue. After 5 served, who is in front?
- Practical (Rwanda): At RSSB, 4 clients queue. Who is last?
- Challenge: Queue vs stack for hospital check-in. Which is right?
- Reflection: Why FIFO fits healthcare services?

Project 53

Stack Questions:

- Practical (Rwanda): UR pushes ["Lab1", "Lab2", "Lab3"]. Pop one. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo 2. Which is left?
- Challenge: Reverse "RWANDATECH" using stack.
- Reflection: Why stack represents last action undone first?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 4 depart, who is in front?
- Practical (Rwanda): At Airtel, 6 customers queue. Who is third served?
- Challenge: Queue vs stack for university registration. Which works?
- Reflection: Why FIFO ensures fair registration process?

Project 54

Stack Questions:

- Practical (Rwanda): MoMo pushes ["PIN", "Amount", "Confirm"]. Undo 2. Which remains?

- Practical (Rwanda): UR student pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop one. Which is top?
- Challenge: Push ["1", "2", "3"], pop once, push "4". Which is top?
- Reflection: Why stack models undo, not queues?

Queue Questions:

- Practical (Rwanda): At CHUK, 5 patients queue. After 3 served, who is in front?
- Practical (Rwanda): At BK ATM, 7 clients queue. Who is second served?
- Challenge: Build circular queue for Nyabugogo buses. Why?
- Reflection: Why FIFO keeps order in transport?

Project 55

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Login", "Open Module", "Submit Work"]. Undo last. What remains?
- Practical (Rwanda): UR pushes ["TopicA", "TopicB", "TopicC"]. Undo 2. Which is left?
- Challenge: Reverse "QUEUEFIFO" using stack.
- Reflection: Why stack cannot model fairness?

Queue Questions:

- Practical (Rwanda): At RSSB, 6 clients queue. After 2 served, who is front?
- Practical (Rwanda): At Airtel, 8 clients queue. Who is served last?
- Challenge: Queue vs stack for e-voting lines. Which is correct?
- Reflection: Why FIFO builds trust in elections?

Project 56

Stack Questions:

- Practical (Rwanda): MoMo pushes ["Step1", "Step2", "Step3"]. Undo one. Which step is left?
- Practical (Rwanda): UR student pushes ["Lecture1", "Lecture2", "Lecture3"]. Undo 2. Which is on top?
- Challenge: Push ["A", "B", "C"], pop all. Which is left?

- Reflection: Why stack ensures last changes are reversed first?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 9 buses queue. After 6 depart, who is front?
- Practical (Rwanda): At RRA, 5 people join queue. After 1 served, who is front?
- Challenge: Queue vs stack for handling service tickets. Which is right?
- Reflection: Why FIFO prevents disputes in services?

Project 57

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Fill Form", "Upload File", "Confirm"]. Undo one. Which is left?
- Practical (Rwanda): UR student pushes ["Class1", "Class2", "Class3"]. Pop one. Which is top?
- Challenge: Reverse "ICTRWANDA" using stack.
- Reflection: Why stack fits undo but not fairness?

Queue Questions:

- Practical (Rwanda): At CHUK, 8 patients queue. After 4 served, who is front?
- Practical (Rwanda): At Airtel, 3 clients queue. Who is served first?
- Challenge: Queue vs stack for food delivery. Which is realistic?
- Reflection: Why FIFO ensures customer satisfaction?

Project 58

Stack Questions:

- Practical (Rwanda): MoMo pushes ["PIN", "Amount", "Confirm"]. Undo once. Which remains?
- Practical (Rwanda): UR pushes ["Rev1", "Rev2", "Rev3"]. Undo two. Which is left?
- Challenge: Show stack operations for ["X", "Y", "Z", "W"] with 2 pops.
- Reflection: Why stack is powerful for reversing?

Queue Questions:

- Practical (Rwanda): At BK ATM, 10 clients queue. After 6 served, who is next?

- Practical (Rwanda): At RRA office, 7 clients queue. Who is served second?
- Challenge: Queue vs stack for classroom attendance order. Which is fair?
- Reflection: Why FIFO matters in classrooms?

Project 59

Stack Questions:

- Practical (Rwanda): In Canvas, push ["LessonA", "LessonB", "LessonC"]. Undo last. Which is left?
- Practical (Rwanda): MoMo pushes ["Step1", "Step2", "Step3"]. Undo two. Which remains?
- Challenge: Reverse "LIFOORDER" using stack.
- Reflection: Why stack always gives last action first?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 5 buses queue. After 2 depart, who is front?
- Practical (Rwanda): At Airtel, 6 clients queue. Who is third served?
- Challenge: Build queue system for RRA clients. Why stack fails?
- Reflection: Why FIFO ensures discipline in queues?

Project 60

Stack Questions:

- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Pop all. Which remains?
- Challenge: Push ["1", "2", "3"], pop 2, push "4". Show top.
- Reflection: Why stack represents temporary action storage?

Queue Questions:

- Practical (Rwanda): At CHUK, 9 patients queue. After 5 served, who is front?
- Practical (Rwanda): At RSSB, 4 clients queue. Who is last served?
- Challenge: Queue vs stack for boarding planes. Which is correct?
- Reflection: Why FIFO maintains order at airports?

Project 61

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Code", "Enter PIN", "Confirm"]. Undo one. Which step remains?
- Practical (Rwanda): UR student pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop all. Which is left?
- Challenge: Reverse "RWANDAICT" using stack.
- Reflection: Why stack fits undo but not line management?

Queue Questions:

- Practical (Rwanda): At BK ATM, 8 clients queue. After 4 served, who is front?
- Practical (Rwanda): At RRA, 6 clients queue. Who is served second?
- Challenge: Queue vs stack for exam seating order. Which works?
- Reflection: Why FIFO ensures discipline in exams?

Project 62

Stack Questions:

- Practical (Rwanda): UR pushes ["Topic1", "Topic2", "Topic3"]. Undo 2. Which is left?
- Practical (Rwanda): In Irembo, push ["Fill Name", "Upload File", "Submit"]. Undo one. Which remains?
- Challenge: Push ["X", "Y", "Z"], pop 2, push "W". Which is top?
- Reflection: Why stack supports last action undone first?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 3 depart, who is in front?
- Practical (Rwanda): At Airtel, 5 clients queue. Who is third served?
- Challenge: Queue vs stack for ordering food at canteen. Which is right?
- Reflection: Why FIFO ensures customer fairness in restaurants?

Project 63

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Module1", "Module2", "Module3"]. Pop one. Which is left?
- Practical (Rwanda): MoMo pushes ["PIN", "Amount", "Confirm"]. Undo 2. Which remains?
- Challenge: Reverse "STACKFIFO" using stack.
- Reflection: Why stack is bad for serving order?

Queue Questions:

- Practical (Rwanda): At RRA, 9 citizens queue. After 4 are served, who is next?
- Practical (Rwanda): At BK ATM, 6 clients queue. Who is last served?
- Challenge: Queue vs stack for public transport boarding. Which is correct?
- Reflection: Why FIFO ensures fairness in buses?

Project 64

Stack Questions:

- Practical (Rwanda): UR pushes ["LectureA", "LectureB", "LectureC"]. Undo two. Which is top?
- Practical (Rwanda): In Irembo, push ["Form1", "Form2", "Form3"]. Pop one. Which remains?
- Challenge: Push ["A", "B", "C", "D"], pop 2, push "E". What is top?
- Reflection: Why stack suits browser backtracking?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 8 buses queue. After 4 depart, which bus is in front?
- Practical (Rwanda): At Airtel, 7 clients queue. Who is served second?
- Challenge: Queue vs stack for stadium entry. Why FIFO is better?
- Reflection: Why FIFO ensures calmness in large events?

Project 65

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Pop all. Which remains?
- Challenge: Reverse "QUEUEORDER" using stack.
- Reflection: Why stack cannot model patient queues?

Queue Questions:

- Practical (Rwanda): At CHUK, 6 patients queue. After 2 served, who is front?
- Practical (Rwanda): At BK ATM, 4 clients queue. Who is first?
- Challenge: Queue vs stack for cafeteria line. Which is fair?
- Reflection: Why FIFO creates trust in healthcare?

Project 66

Stack Questions:

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo 2. Which is left?
- Challenge: Push ["1", "2", "3", "4"], pop twice. Which is top?
- Reflection: Why stack supports undo history?

Queue Questions:

- Practical (Rwanda): At RRA, 5 clients queue. After 1 served, who is next?
- Practical (Rwanda): At Airtel, 6 customers queue. Who is last?
- Challenge: Queue vs stack for traffic lights at junction. Which fits?
- Reflection: Why FIFO matches fairness in roads?

Project 67

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "PIN", "Confirm"]. Undo one. Which is left?
- Practical (Rwanda): UR student pushes ["Lecture1", "Lecture2", "Lecture3"]. Pop one. Which is top?

- Challenge: Reverse "KINYARWANDA" using stack.
- Reflection: Why stack ensures last-in is first-out?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 10 buses queue. After 5 depart, who is in front?
- Practical (Rwanda): At RSSB, 6 clients queue. Who is second served?
- Challenge: Queue vs stack for public service offices. Which is proper?
- Reflection: Why FIFO builds equality in government services?

Project 68

Stack Questions:

- Practical (Rwanda): UR pushes ["NoteA", "NoteB", "NoteC"]. Pop two. Which remains?
- Practical (Rwanda): In Irembo, push ["Fill Form", "Upload Photo", "Confirm"]. Undo one. Which is left?
- Challenge: Push ["A", "B", "C"], pop all, then push "D". Which is top?
- Reflection: Why stack cannot ensure fairness in queues?

Queue Questions:

- Practical (Rwanda): At CHUK, 8 patients queue. After 4 served, who is in front?
- Practical (Rwanda): At Airtel, 5 clients queue. Who is served last?
- Challenge: Queue vs stack for boarding buses. Which matches reality?
- Reflection: Why FIFO ensures fairness in transport?

Project 69

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["Exercise1", "Exercise2", "Exercise3"]. Undo one. Which is left?
- Challenge: Reverse "STACKMODEL" using stack.
- Reflection: Why stack is good for undo but not for customer order?

Queue Questions:

- Practical (Rwanda): At RRA, 7 clients queue. After 3 served, who is next?
- Practical (Rwanda): At BK ATM, 9 clients queue. Who is served second?
- Challenge: Queue vs stack for voters. Which ensures fairness?
- Reflection: Why FIFO is linked with democracy?

Project 70

Stack Questions:

- Practical (Rwanda): UR pushes ["Class1", "Class2", "Class3"]. Pop two. Which is top?
- Practical (Rwanda): In Irembo, push ["Form1", "Form2", "Form3"]. Pop all. Which is left?
- Challenge: Push ["1", "2", "3", "4"], pop 1, push "5". Which is top?
- Reflection: Why stack models recent activity well?

Queue Questions:

- Practical (Rwanda): At Airtel, 6 clients queue. After 2 served, who is in front?
- Practical (Rwanda): At Nyabugogo, 8 buses queue. Who is last?
- Challenge: Queue vs stack for restaurant orders. Which works?
- Reflection: Why FIFO matters in service businesses?

Project 71

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Code", "PIN", "Confirm"]. Undo 1. Which is left?
- Practical (Rwanda): UR pushes ["QuizA", "QuizB", "QuizC"]. Pop two. Which is top?
- Challenge: Reverse "URCAMPUS" using stack.
- Reflection: Why stack helps in problem backtracking?

Queue Questions:

- Practical (Rwanda): At CHUK, 7 patients queue. After 3 served, who is in front?
- Practical (Rwanda): At Airtel, 5 clients queue. Who is served third?

- Challenge: Queue vs stack for classroom roll call. Which is fair?
- Reflection: Why FIFO ensures equality in attendance?

Project 72

Stack Questions:

- Practical (Rwanda): UR pushes ["Lab1", "Lab2", "Lab3"]. Pop one. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo one. Which is left?
- Challenge: Push ["X", "Y", "Z"], pop all, then push "W". Which is top?
- Reflection: Why stack represents temporary memory?

Queue Questions:

- Practical (Rwanda): At RRA, 6 citizens queue. After 2 served, who is in front?
- Practical (Rwanda): At BK ATM, 10 clients queue. Who is last?
- Challenge: Queue vs stack for event entry. Which works?
- Reflection: Why FIFO ensures fairness in public events?

Project 73

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["Topic1", "Topic2", "Topic3"]. Pop two. Which is top?
- Challenge: Reverse "ICTRWANDA" using stack.
- Reflection: Why stack cannot model fairness?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 5 depart, who is in front?
- Practical (Rwanda): At Airtel, 8 clients queue. Who is second served?
- Challenge: Queue vs stack for school lunch lines. Which is right?
- Reflection: Why FIFO matches fairness in schools?

Project 74

Stack Questions:

- Practical (Rwanda): UR pushes ["Lecture1", "Lecture2", "Lecture3"]. Pop all. Which is left?
- Practical (Rwanda): In Irembo, push ["FormA", "FormB", "FormC"]. Undo one. Which remains?
- Challenge: Push ["1", "2", "3"], pop 2, push "4". Which is top?
- Reflection: Why stack helps for undo in form submissions?

Queue Questions:

- Practical (Rwanda): At RRA, 5 clients queue. After 1 served, who is front?
- Practical (Rwanda): At RSSB, 7 clients queue. Who is third served?
- Challenge: Queue vs stack for hospital check-in. Which works?
- Reflection: Why FIFO builds trust in hospitals?

Project 75

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "PIN", "Confirm"]. Undo last. Which is left?
- Practical (Rwanda): UR pushes ["ExerciseA", "ExerciseB", "ExerciseC"]. Pop two. Which is top?
- Challenge: Reverse "QUEUESTACK" using stack.
- Reflection: Why stack is best for reversing sequences?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 9 buses queue. After 5 depart, who is in front?
- Practical (Rwanda): At Airtel, 6 clients queue. Who is last?
- Challenge: Queue vs stack for managing voting lines. Which is correct?
- Reflection: Why FIFO ensures fairness in elections?

Project 76

Stack Questions:

- Practical (Rwanda): UR pushes ["Chapter1", "Chapter2", "Chapter3"]. Undo 1. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo 2. Which is left?
- Challenge: Push ["A", "B", "C", "D"], pop 2, push "E". Which is top?
- Reflection: Why stack cannot handle queues of clients?

Queue Questions:

- Practical (Rwanda): At CHUK, 10 patients queue. After 7 served, who is front?
- Practical (Rwanda): At BK ATM, 8 clients queue. Who is third?
- Challenge: Queue vs stack for canteen meals. Which fits?
- Reflection: Why FIFO gives fairness in services?

Project 77

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Code", "Enter PIN", "Confirm"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["Lesson1", "Lesson2", "Lesson3"]. Pop one. Which is top?
- Challenge: Reverse "RWANDALIFE" using stack.
- Reflection: Why stack models undo actions well?

Queue Questions:

- Practical (Rwanda): At RRA, 6 citizens queue. After 3 served, who is next?
- Practical (Rwanda): At Airtel, 9 clients queue. Who is last?
- Challenge: Queue vs stack for event tickets. Which is correct?
- Reflection: Why FIFO ensures fairness in tickets?

Project 78

Stack Questions:

- Practical (Rwanda): UR pushes ["Note1", "Note2", "Note3"]. Undo 2. Which is left?
- Practical (Rwanda): In Irembo, push ["Upload File", "Fill Details", "Confirm"]. Undo 1. Which is left?

- Challenge: Push ["1", "2", "3", "4"], pop 3, push "5". Which is top?
- Reflection: Why stack represents memory history?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 12 buses queue. After 8 depart, who is front?
- Practical (Rwanda): At CHUK, 5 patients queue. Who is served second?
- Challenge: Queue vs stack for graduation ceremony seating. Which is right?
- Reflection: Why FIFO ensures fairness in ceremonies?

Project 79

Stack Questions:

- Practical (Rwanda): In MoMo, push ["StepA", "StepB", "StepC"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["AssignmentA", "AssignmentB", "AssignmentC"]. Pop one. Which is top?
- Challenge: Reverse "EDUCATION" using stack.
- Reflection: Why stack is unsuited for client management?

Queue Questions:

- Practical (Rwanda): At RRA, 8 clients queue. After 4 served, who is front?
- Practical (Rwanda): At Airtel, 7 clients queue. Who is second?
- Challenge: Queue vs stack for passport collection. Which works?
- Reflection: Why FIFO reduces disputes in services?

Project 80

Stack Questions:

- Practical (Rwanda): UR pushes ["Course1", "Course2", "Course3"]. Undo all. Which remains?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo 1. Which is left?
- Challenge: Push ["X", "Y", "Z"], pop one, push "W". Which is top?
- Reflection: Why stack models reverse sequences?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 10 buses queue. After 5 depart, who is front?
- Practical (Rwanda): At CHUK, 8 patients queue. Who is served last?
- Challenge: Queue vs stack for lunch line. Which is fair?
- Reflection: Why FIFO ensures fairness in dining halls?

Project 81

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial Code", "Enter PIN", "Confirm"]. Undo once. Which step remains?
- Practical (Rwanda): UR pushes ["AssignmentA", "AssignmentB", "AssignmentC"]. Pop two. Which is left?
- Challenge: Reverse "QUEUEFAIR" using stack.
- Reflection: Why stack is good for undo but not for fairness?

Queue Questions:

- Practical (Rwanda): At BK ATM, 7 clients queue. After 3 served, who is in front?
- Practical (Rwanda): At RRA, 5 citizens queue. Who is second served?
- Challenge: Queue vs stack for boarding buses at Nyabugogo. Which works?
- Reflection: Why FIFO prevents disputes in transport?

Project 82

Stack Questions:

- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Undo two. Which is top?
- Practical (Rwanda): In Irembo, push ["Upload ID", "Fill Form", "Submit"]. Undo one. Which is left?
- Challenge: Push ["1", "2", "3", "4"], pop one, push "5". Which is top?
- Reflection: Why stack suits tracking browser history?

Queue Questions:

- Practical (Rwanda): At Airtel, 6 clients queue. After 2 served, who is in front?
- Practical (Rwanda): At CHUK, 8 patients queue. Who is last served?

- Challenge: Queue vs stack for election voting lines. Which is proper?
- Reflection: Why FIFO supports democracy?

Project 83

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Undo last. Which is left?
- Practical (Rwanda): UR pushes ["Note1", "Note2", "Note3"]. Pop one. Which is top?
- Challenge: Reverse "RWANDAICT" using stack.
- Reflection: Why stack provides last-in-first-out?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 12 buses queue. After 6 depart, who is in front?
- Practical (Rwanda): At RSSB, 5 clients queue. Who is third?
- Challenge: Queue vs stack for distributing relief items. Which is fair?
- Reflection: Why FIFO ensures equality in aid distribution?

Project 84

Stack Questions:

- Practical (Rwanda): UR pushes ["LectureA", "LectureB", "LectureC"]. Undo two. Which is top?
- Practical (Rwanda): In Irembo, push ["StepA", "StepB", "StepC"]. Undo all. Which remains?
- Challenge: Push ["X", "Y", "Z"], pop two, push "W". Which is top?
- Reflection: Why stack models undo operations in apps?

Queue Questions:

- Practical (Rwanda): At BK ATM, 10 clients queue. After 4 served, who is in front?
- Practical (Rwanda): At RRA, 8 clients queue. Who is served last?
- Challenge: Queue vs stack for canteen lunch distribution. Which is right?
- Reflection: Why FIFO reduces chaos in cafeterias?

Project 85

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Number", "Enter Amount", "Confirm"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["Chapter1", "Chapter2", "Chapter3"]. Pop all. Which is left?
- Challenge: Reverse "DATAQUEUE" using stack.
- Reflection: Why stack does not suit long queues?

Queue Questions:

- Practical (Rwanda): At Airtel, 7 clients queue. After 3 served, who is front?
- Practical (Rwanda): At CHUK, 5 patients queue. Who is second served?
- Challenge: Queue vs stack for graduation ceremony entry. Which is proper?
- Reflection: Why FIFO matches fairness in ceremonies?

Project 86

Stack Questions:

- Practical (Rwanda): UR pushes ["Lab1", "Lab2", "Lab3"]. Undo two. Which remains?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo one. Which step is top?
- Challenge: Push ["1", "2", "3", "4"], pop three, push "5". Which is top?
- Reflection: Why stack fits undo but not service queues?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 8 buses queue. After 5 depart, who is front?
- Practical (Rwanda): At RRA, 6 clients queue. Who is last?
- Challenge: Queue vs stack for ordering exam papers. Which is correct?
- Reflection: Why FIFO ensures fairness in academics?

Project 87

Stack Questions:

- Practical (Rwanda): In MoMo, push ["StepA", "StepB", "StepC"]. Undo two. Which remains?
- Practical (Rwanda): UR pushes ["AssignmentX", "AssignmentY", "AssignmentZ"]. Pop one. Which is top?
- Challenge: Reverse "EDUCATION" using stack.
- Reflection: Why stack can't handle queues in hospitals?

Queue Questions:

- Practical (Rwanda): At BK ATM, 9 clients queue. After 3 served, who is front?
- Practical (Rwanda): At Airtel, 5 clients queue. Who is served first?
- Challenge: Queue vs stack for school attendance roll call. Which is fair?
- Reflection: Why FIFO builds fairness in education?

Project 88

Stack Questions:

- Practical (Rwanda): UR pushes ["Lecture1", "Lecture2", "Lecture3"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["Upload ID", "Fill Address", "Submit"]. Undo two. Which remains?
- Challenge: Push ["A", "B", "C"], pop all, push "D". Which is top?
- Reflection: Why stack suits redo/undo in online platforms?

Queue Questions:

- Practical (Rwanda): At CHUK, 10 patients queue. After 7 served, who is front?
- Practical (Rwanda): At Nyabugogo, 6 buses queue. Who is served second?
- Challenge: Queue vs stack for concert ticket lines. Which works?
- Reflection: Why FIFO ensures fairness in entertainment events?

Project 89

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["Exercise1", "Exercise2", "Exercise3"]. Undo two. Which is top?

- Challenge: Reverse "STACKRWANDA" using stack.
- Reflection: Why stack reflects last-action priority?

Queue Questions:

- Practical (Rwanda): At Airtel, 8 clients queue. After 4 served, who is in front?
- Practical (Rwanda): At RSSB, 5 clients queue. Who is last served?
- Challenge: Queue vs stack for polling station. Which is correct?
- Reflection: Why FIFO builds trust in elections?

Project 90

Stack Questions:

- Practical (Rwanda): UR pushes ["QuizA", "QuizB", "QuizC"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["StepA", "StepB", "StepC"]. Pop all. Which remains?
- Challenge: Push ["1", "2", "3"], pop 2, push "4". Which is top?
- Reflection: Why stack best models backtracking?

Queue Questions:

- Practical (Rwanda): At RRA, 6 citizens queue. After 2 served, who is next?
- Practical (Rwanda): At BK ATM, 7 clients queue. Who is served last?
- Challenge: Queue vs stack for distributing IDs. Which works?
- Reflection: Why FIFO supports fairness in government services?

Project 91

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Undo one. Which step is left?
- Practical (Rwanda): UR pushes ["Note1", "Note2", "Note3"]. Undo two. Which is top?
- Challenge: Reverse "RWANDALOVE" using stack.
- Reflection: Why stack gives priority to latest action?

Queue Questions:

- Practical (Rwanda): At CHUK, 7 patients queue. After 5 served, who is front?
- Practical (Rwanda): At Airtel, 6 clients queue. Who is second served?
- Challenge: Queue vs stack for boarding airplanes. Which is fair?
- Reflection: Why FIFO ensures fairness in air travel?

Project 92

Stack Questions:

- Practical (Rwanda): UR pushes ["TopicX", "TopicY", "TopicZ"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["StepX", "StepY", "StepZ"]. Undo all. Which remains?
- Challenge: Push ["A", "B", "C", "D"], pop 3, push "E". Which is top?
- Reflection: Why stack is limited for serving clients?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 9 buses queue. After 4 depart, who is front?
- Practical (Rwanda): At BK ATM, 8 clients queue. Who is third?
- Challenge: Queue vs stack for ordering hospital medicine. Which works?
- Reflection: Why FIFO supports fairness in pharmacies?

Project 93

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Service", "Confirm"]. Undo one. Which is left?
- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Undo all. Which remains?
- Challenge: Reverse "LIFOSTACK" using stack.
- Reflection: Why stack supports undo but not long queues?

Queue Questions:

- Practical (Rwanda): At RRA, 7 clients queue. After 2 served, who is front?
- Practical (Rwanda): At RSSB, 6 clients queue. Who is last served?
- Challenge: Queue vs stack for serving pensioners. Which fits?

- Reflection: Why FIFO ensures elderly are treated fairly?

Project 94

Stack Questions:

- Practical (Rwanda): UR pushes ["LessonA", "LessonB", "LessonC"]. Pop one. Which is top?
- Practical (Rwanda): In Irembo, push ["FormA", "FormB", "FormC"]. Undo one. Which remains?
- Challenge: Push ["1", "2", "3"], pop 2, push "4". Which is top?
- Reflection: Why stack models reverse order?

Queue Questions:

- Practical (Rwanda): At Airtel, 5 clients queue. After 1 served, who is next?
- Practical (Rwanda): At Nyabugogo, 12 buses queue. After 8 depart, who is front?
- Challenge: Queue vs stack for distributing tickets. Which works?
- Reflection: Why FIFO avoids chaos in ticketing?

Project 95

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter PIN", "Enter Amount", "Confirm"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["Topic1", "Topic2", "Topic3"]. Pop two. Which is top?
- Challenge: Reverse "QUEUEFIFO" using stack.
- Reflection: Why stack is unsuitable for service fairness?

Queue Questions:

- Practical (Rwanda): At CHUK, 10 patients queue. After 6 served, who is in front?
- Practical (Rwanda): At BK ATM, 9 clients queue. Who is second?
- Challenge: Queue vs stack for polling station. Which is fair?
- Reflection: Why FIFO builds confidence in elections?

Project 96

Stack Questions:

- Practical (Rwanda): UR pushes ["LabA", "LabB", "LabC"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["Upload File", "Fill Form", "Confirm"]. Undo 2. Which remains?
- Challenge: Push ["X", "Y", "Z"], pop all. Which is left?
- Reflection: Why stack is temporary storage of actions?

Queue Questions:

- Practical (Rwanda): At RRA, 6 clients queue. After 3 served, who is front?
- Practical (Rwanda): At Airtel, 8 clients queue. Who is last?
- Challenge: Queue vs stack for cafeteria services. Which is correct?
- Reflection: Why FIFO ensures fairness in food service?

Project 97

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Undo two. Which is top?
- Practical (Rwanda): UR pushes ["ExerciseA", "ExerciseB", "ExerciseC"]. Pop one. Which is left?
- Challenge: Reverse "ICTCLASS" using stack.
- Reflection: Why stack is good for undo, not fairness?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 4 depart, who is front?
- Practical (Rwanda): At CHUK, 6 patients queue. Who is third?
- Challenge: Queue vs stack for distributing ID cards. Which fits?
- Reflection: Why FIFO avoids conflict in ID processing?

Project 98

Stack Questions:

- Practical (Rwanda): UR pushes ["LectureX", "LectureY", "LectureZ"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["StepX", "StepY", "StepZ"]. Undo all. Which remains?
- Challenge: Push ["1", "2", "3", "4"], pop 3. Which remains?
- Reflection: Why stack can't manage queues of customers?

Queue Questions:

- Practical (Rwanda): At Airtel, 5 clients queue. After 2 served, who is in front?
- Practical (Rwanda): At BK ATM, 7 clients queue. Who is last served?
- Challenge: Queue vs stack for online registration. Which is correct?
- Reflection: Why FIFO ensures fairness in digital queues?

Project 99

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["AssignmentX", "AssignmentY", "AssignmentZ"]. Pop two. Which is left?
- Challenge: Reverse "STUDENT" using stack.
- Reflection: Why stack ensures last edits undone first?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 10 buses queue. After 6 depart, who is in front?
- Practical (Rwanda): At RRA, 9 citizens queue. Who is served third?
- Challenge: Queue vs stack for distributing exam scripts. Which is proper?
- Reflection: Why FIFO supports fairness in grading?

Project 100

Stack Questions:

- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Undo one. Which is top?

- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Pop all. Which remains?
- Challenge: Push ["A", "B", "C", "D"], pop 2, push "E". Which is top?
- Reflection: Why stack is not suitable for queues in real life?

Queue Questions:

- Practical (Rwanda): At Airtel, 12 clients queue. After 7 served, who is in front?
- Practical (Rwanda): At CHUK, 5 patients queue. Who is second served?
- Challenge: Queue vs stack for bank service counters. Which is correct?
- Reflection: Why FIFO ensures trust in banking?

Project 101

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Number", "Enter Amount", "Confirm"]. Undo one. Which step remains?
- Practical (Rwanda): UR student pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop two. Which is left?
- Challenge: Reverse "KIGALI" using stack.
- Reflection: Why stack is helpful for reversing words but not for serving people?

Queue Questions:

- Practical (Rwanda): At BK ATM, 8 clients queue. After 3 served, who is in front?
- Practical (Rwanda): At RRA, 6 people queue. Who is served last?
- Challenge: Queue vs stack for distributing food aid. Which ensures fairness?
- Reflection: Why FIFO is essential in public distribution?

Project 102

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Upload ID", "Fill Form", "Confirm"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["TopicA", "TopicB", "TopicC"]. Pop all. Which remains?

- Challenge: Push ["A", "B", "C", "D"], pop 2, push "E". Which is top?
- Reflection: Why stack naturally models undo operations?

Queue Questions:

- Practical (Rwanda): At Airtel, 5 clients queue. After 1 served, who is next?
- Practical (Rwanda): At CHUK, 9 patients queue. Who is third served?
- Challenge: Queue vs stack for event ticketing. Which is correct?
- Reflection: Why FIFO prevents chaos at concerts?

Project 103

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo last. Which remains?
- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Pop two. Which is left?
- Challenge: Reverse "RWANDA" using stack.
- Reflection: Why stack can't replace FIFO in customer lines?

Queue Questions:

- Practical (Rwanda): At RRA, 7 clients queue. After 3 served, who is front?
- Practical (Rwanda): At BK ATM, 6 clients queue. Who is second served?
- Challenge: Queue vs stack for graduation ceremony seating. Which is right?
- Reflection: Why FIFO ensures fairness at ceremonies?

Project 104

Stack Questions:

- Practical (Rwanda): In Canvas, push ["Open Module", "Attempt Quiz", "Submit Quiz"]. Undo one. Which is left?
- Practical (Rwanda): UR pushes ["Note1", "Note2", "Note3"]. Pop one. Which is top?
- Challenge: Push ["1", "2", "3"], pop 2, push "4". Which is top?
- Reflection: Why stack suits backtracking actions?

Queue Questions:

- Practical (Rwanda): At Airtel, 10 clients queue. After 5 served, who is in front?
- Practical (Rwanda): At CHUK, 6 patients queue. Who is last?
- Challenge: Queue vs stack for polling station lines. Which is fair?
- Reflection: Why FIFO ensures fairness in elections?

Project 105

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "PIN", "Confirm"]. Undo one. Which is left?
- Practical (Rwanda): UR pushes ["Lab1", "Lab2", "Lab3"]. Pop all. Which remains?
- Challenge: Reverse "QUEUEFIFO" using stack.
- Reflection: Why stack ensures last actions are undone first?

Queue Questions:

- Practical (Rwanda): At RRA, 9 citizens queue. After 6 served, who is front?
- Practical (Rwanda): At Nyabugogo, 8 buses queue. Who departs first?
- Challenge: Queue vs stack for ordering canteen food. Which fits?
- Reflection: Why FIFO avoids disputes in dining halls?

Project 106

Stack Questions:

- Practical (Rwanda): In Irembo, push ["Form1", "Form2", "Form3"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["LectureX", "LectureY", "LectureZ"]. Pop two. Which is top?
- Challenge: Push ["X", "Y", "Z"], pop 1, push "W". Which is top?
- Reflection: Why stack doesn’t work for queues in hospitals?

Queue Questions:

- Practical (Rwanda): At Airtel, 6 clients queue. After 2 served, who is next?
- Practical (Rwanda): At CHUK, 10 patients queue. Who is served second?
- Challenge: Queue vs stack for distributing exam papers. Which works?

- Reflection: Why FIFO ensures fairness in exams?

Project 107

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter PIN", "Select Service", "Confirm"]. Undo last. Which is left?
- Practical (Rwanda): UR pushes ["AssignmentA", "AssignmentB", "AssignmentC"]. Pop two. Which is left?
- Challenge: Reverse "DATASTRUCTURE" using stack.
- Reflection: Why stack models temporary memory?

Queue Questions:

- Practical (Rwanda): At RRA, 8 clients queue. After 3 served, who is in front?
- Practical (Rwanda): At BK ATM, 7 clients queue. Who is last?
- Challenge: Queue vs stack for meal distribution at UR. Which is correct?
- Reflection: Why FIFO ensures fairness in schools?

Project 108

Stack Questions:

- Practical (Rwanda): UR pushes ["Exercise1", "Exercise2", "Exercise3"]. Undo two. Which is top?
- Practical (Rwanda): In Irembo, push ["StepA", "StepB", "StepC"]. Undo one. Which remains?
- Challenge: Push ["A", "B", "C", "D"], pop three. Which remains?
- Reflection: Why stack ensures last edits undone first?

Queue Questions:

- Practical (Rwanda): At CHUK, 9 patients queue. After 4 served, who is in front?
- Practical (Rwanda): At Airtel, 5 clients queue. Who is third?
- Challenge: Queue vs stack for graduation procession. Which fits?
- Reflection: Why FIFO maintains order in ceremonies?

Project 109

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["Lecture1", "Lecture2", "Lecture3"]. Pop all. Which remains?
- Challenge: Reverse "KINYARWANDA" using stack.
- Reflection: Why stack is not used in customer queues?

Queue Questions:

- Practical (Rwanda): At RRA, 5 clients queue. After 1 served, who is in front?
- Practical (Rwanda): At BK ATM, 8 clients queue. Who is served second?
- Challenge: Queue vs stack for stadium entry. Which is fair?
- Reflection: Why FIFO prevents conflict at events?

Project 110

Stack Questions:

- Practical (Rwanda): UR pushes ["QuizA", "QuizB", "QuizC"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["Upload", "Fill Form", "Confirm"]. Undo two. Which remains?
- Challenge: Push ["X", "Y", "Z"], pop two, push "W". Which is top?
- Reflection: Why stack is best for tracking actions in apps?

Queue Questions:

- Practical (Rwanda): At Airtel, 12 clients queue. After 7 served, who is in front?
- Practical (Rwanda): At CHUK, 6 patients queue. Who is last served?
- Challenge: Queue vs stack for distributing books. Which is correct?
- Reflection: Why FIFO ensures fairness in libraries?

Project 111

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter PIN", "Enter Amount", "Confirm"]. Undo one. Which is left?

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop two. Which is left?
- Challenge: Reverse "STACKFIFO" using stack.
- Reflection: Why stack ensures LIFO behavior?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 7 buses queue. After 4 depart, who is in front?
- Practical (Rwanda): At RRA, 6 citizens queue. Who is second?
- Challenge: Queue vs stack for distributing ID cards. Which works?
- Reflection: Why FIFO avoids conflicts in government services?

Project 112

Stack Questions:

- Practical (Rwanda): UR pushes ["LabA", "LabB", "LabC"]. Undo all. Which remains?
- Practical (Rwanda): In Irembo, push ["FormA", "FormB", "FormC"]. Undo one. Which remains?
- Challenge: Push ["1", "2", "3"], pop two, push "4". Which is top?
- Reflection: Why stack represents temporary actions?

Queue Questions:

- Practical (Rwanda): At Airtel, 8 clients queue. After 3 served, who is front?
- Practical (Rwanda): At BK ATM, 5 clients queue. Who is served last?
- Challenge: Queue vs stack for distributing voter cards. Which is correct?
- Reflection: Why FIFO ensures fairness in elections?

Project 113

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["Topic1", "Topic2", "Topic3"]. Pop 1. Which is top?
- Challenge: Reverse "RWANDACODE" using stack.

- Reflection: Why stack ensures last change first undone?

Queue Questions:

- Practical (Rwanda): At RRA, 9 clients queue. After 6 served, who is front?
- Practical (Rwanda): At RSSB, 7 clients queue. Who is third?
- Challenge: Queue vs stack for distributing exam scripts. Which is correct?
- Reflection: Why FIFO ensures fairness in grading?

Project 114

Stack Questions:

- Practical (Rwanda): UR pushes ["LectureA", "LectureB", "LectureC"]. Undo 1. Which is top?
- Practical (Rwanda): In Irembo, push ["Upload", "Fill", "Confirm"]. Undo 2. Which remains?
- Challenge: Push ["X", "Y", "Z", "W"], pop 3. Which is top?
- Reflection: Why stack is efficient for backtracking?

Queue Questions:

- Practical (Rwanda): At Airtel, 7 clients queue. After 4 served, who is front?
- Practical (Rwanda): At CHUK, 6 patients queue. Who is last?
- Challenge: Queue vs stack for food queue in cafeteria. Which works?
- Reflection: Why FIFO promotes fairness in dining halls?

Project 115

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo one. Which is left?
- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Pop two. Which is top?
- Challenge: Reverse "QUEUESTACK" using stack.
- Reflection: Why stack is bad for fair client service?

Queue Questions:

- Practical (Rwanda): At RRA, 8 citizens queue. After 2 served, who is next?

- Practical (Rwanda): At BK ATM, 10 clients queue. Who is second?
- Challenge: Queue vs stack for hospital waiting lines. Which is fair?
- Reflection: Why FIFO builds trust in healthcare?

Project 116

Stack Questions:

- Practical (Rwanda): UR pushes ["AssignmentA", "AssignmentB", "AssignmentC"]. Pop one. Which is top?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo 2. Which remains?
- Challenge: Push ["1", "2", "3", "4"], pop 2, push "5". Which is top?
- Reflection: Why stack naturally models undo?

Queue Questions:

- Practical (Rwanda): At Nyabugogo, 6 buses queue. After 3 depart, who is front?
- Practical (Rwanda): At Airtel, 9 clients queue. Who is last?
- Challenge: Queue vs stack for ticket sales. Which works?
- Reflection: Why FIFO ensures fairness at events?

Project 117

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "PIN", "Confirm"]. Undo 1. Which is left?
- Practical (Rwanda): UR pushes ["LabX", "LabY", "LabZ"]. Pop two. Which is top?
- Challenge: Reverse "RWANDAFIFO" using stack.
- Reflection: Why stack supports undo not fairness?

Queue Questions:

- Practical (Rwanda): At CHUK, 8 patients queue. After 4 served, who is in front?
- Practical (Rwanda): At RRA, 6 clients queue. Who is served third?
- Challenge: Queue vs stack for distributing relief goods. Which fits?

- Reflection: Why FIFO ensures equality in distribution?

Project 118

Stack Questions:

- Practical (Rwanda): UR pushes ["Lecture1", "Lecture2", "Lecture3"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["FormX", "FormY", "FormZ"]. Undo all. Which remains?
- Challenge: Push ["A", "B", "C"], pop 2, push "D". Which is top?
- Reflection: Why stack records last action best?

Queue Questions:

- Practical (Rwanda): At Airtel, 7 clients queue. After 2 served, who is front?
- Practical (Rwanda): At Nyabugogo, 10 buses queue. Who is last served?
- Challenge: Queue vs stack for school canteen. Which is fair?
- Reflection: Why FIFO ensures fairness in schools?

Project 119

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["TopicA", "TopicB", "TopicC"]. Pop 1. Which is top?
- Challenge: Reverse "STACKDATA" using stack.
- Reflection: Why stack always undoes latest step?

Queue Questions:

- Practical (Rwanda): At RRA, 9 citizens queue. After 4 served, who is front?
- Practical (Rwanda): At BK ATM, 8 clients queue. Who is third served?
- Challenge: Queue vs stack for boarding planes. Which is proper?
- Reflection: Why FIFO ensures order in airports?

Project 120

Stack Questions:

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Undo 2. Which is left?
- Practical (Rwanda): In Irembo, push ["Step1", "Step2", "Step3"]. Undo 1. Which is top?
- Challenge: Push ["1", "2", "3", "4"], pop all, push "5". Which is top?
- Reflection: Why stack best fits undo/redo systems?

Queue Questions:

- Practical (Rwanda): At Airtel, 6 clients queue. After 3 served, who is in front?
- Practical (Rwanda): At CHUK, 7 patients queue. Who is second served?
- Challenge: Queue vs stack for handling exam registration. Which works?
- Reflection: Why FIFO ensures fairness in student services?

Project 121

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Enter Code", "Enter PIN", "Confirm"]. Undo one. Which step remains?
- Practical (Rwanda): UR pushes ["Quiz1", "Quiz2", "Quiz3"]. Pop two. Which is left?
- Challenge: Reverse "KIGALICITY" using stack.
- Reflection: Why stack is best for tracking recent actions?

Queue Questions:

- Practical (Rwanda): At RRA, 8 citizens queue. After 3 served, who is in front?
- Practical (Rwanda): At BK ATM, 6 clients queue. Who is last?
- Challenge: Queue vs stack for distributing relief food. Which is fair?
- Reflection: Why FIFO prevents unfairness in distribution?

Project 122

Stack Questions:

- Practical (Rwanda): UR pushes ["Assignment1", "Assignment2", "Assignment3"]. Pop one. Which is top?

- Practical (Rwanda): In Irembo, push ["Form1", "Form2", "Submit"]. Undo all. Which remains?
- Challenge: Push ["X", "Y", "Z"], pop 2, push "W". Which is top?
- Reflection: Why stack undoes last edits first?

Queue Questions:

- Practical (Rwanda): At Airtel, 7 clients queue. After 2 served, who is in front?
- Practical (Rwanda): At CHUK, 9 patients queue. Who is served third?
- Challenge: Queue vs stack for student registration. Which is correct?
- Reflection: Why FIFO ensures fairness in universities?

Project 123

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "PIN", "Confirm"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["LectureA", "LectureB", "LectureC"]. Pop all. Which remains?
- Challenge: Reverse "QUEUEORDER" using stack.
- Reflection: Why stack cannot replace queues in services?

Queue Questions:

- Practical (Rwanda): At RRA, 10 citizens queue. After 6 served, who is in front?
- Practical (Rwanda): At BK ATM, 5 clients queue. Who is second?
- Challenge: Queue vs stack for handing out IDs. Which is fair?
- Reflection: Why FIFO ensures equality in civic services?

Project 124

Stack Questions:

- Practical (Rwanda): UR pushes ["Lab1", "Lab2", "Lab3"]. Undo 1. Which is top?
- Practical (Rwanda): In Irembo, push ["Upload", "Fill Form", "Confirm"]. Undo 2. Which remains?
- Challenge: Push ["1", "2", "3", "4"], pop three, push "5". Which is top?
- Reflection: Why stack is suited for redo/undo in forms?

Queue Questions:

- Practical (Rwanda): At Airtel, 12 clients queue. After 5 served, who is in front?
- Practical (Rwanda): At CHUK, 8 patients queue. Who is last served?
- Challenge: Queue vs stack for stadium entry. Which works?
- Reflection: Why FIFO avoids disorder at public events?

Project 125

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Step1", "Step2", "Step3"]. Undo last. Which is left?
- Practical (Rwanda): UR pushes ["Note1", "Note2", "Note3"]. Pop two. Which is left?
- Challenge: Reverse "URSTUDENT" using stack.
- Reflection: Why stack supports last-in-first-out processing?

Queue Questions:

- Practical (Rwanda): At RRA, 7 citizens queue. After 3 served, who is front?
- Practical (Rwanda): At Airtel, 6 clients queue. Who is third?
- Challenge: Queue vs stack for distributing books in library. Which fits?
- Reflection: Why FIFO ensures fairness in academic services?

Project 126

Stack Questions:

- Practical (Rwanda): UR pushes ["AssignmentX", "AssignmentY", "AssignmentZ"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["StepX", "StepY", "StepZ"]. Undo all. Which remains?
- Challenge: Push ["A", "B", "C"], pop all, push "D". Which is top?
- Reflection: Why stack is best for reversing input order?

Queue Questions:

- Practical (Rwanda): At CHUK, 10 patients queue. After 7 served, who is front?
- Practical (Rwanda): At Nyabugogo, 8 buses queue. Who departs first?

- Challenge: Queue vs stack for distributing voter cards. Which is correct?
- Reflection: Why FIFO promotes trust in elections?

Project 127

Stack Questions:

- Practical (Rwanda): In MoMo, push ["PIN", "Amount", "Confirm"]. Undo one. Which remains?
- Practical (Rwanda): UR pushes ["TopicA", "TopicB", "TopicC"]. Pop two. Which is left?
- Challenge: Reverse "RWANDAVOTE" using stack.
- Reflection: Why stack is unsuitable for large queues?

Queue Questions:

- Practical (Rwanda): At RRA, 9 clients queue. After 4 served, who is in front?
- Practical (Rwanda): At Airtel, 7 clients queue. Who is last served?
- Challenge: Queue vs stack for passport issuance. Which works?
- Reflection: Why FIFO ensures transparency in services?

Project 128

Stack Questions:

- Practical (Rwanda): UR pushes ["Lecture1", "Lecture2", "Lecture3"]. Undo one. Which is top?
- Practical (Rwanda): In Irembo, push ["FormA", "FormB", "FormC"]. Undo 2. Which remains?
- Challenge: Push ["X", "Y", "Z", "W"], pop 3. Which is top?
- Reflection: Why stack is best for short-term storage?

Queue Questions:

- Practical (Rwanda): At CHUK, 6 patients queue. After 2 served, who is in front?
- Practical (Rwanda): At BK ATM, 10 clients queue. Who is last served?
- Challenge: Queue vs stack for distributing scholarships. Which fits?
- Reflection: Why FIFO ensures fairness in education services?

Project 129

Stack Questions:

- Practical (Rwanda): In MoMo, push ["Dial", "PIN", "Confirm"]. Undo 2. Which remains?
- Practical (Rwanda): UR pushes ["QuizA", "QuizB", "QuizC"]. Pop one. Which is top?
- Challenge: Reverse "STACKCODE" using stack.
- Reflection: Why stack cannot serve fairness in queues?

Queue Questions:

- Practical (Rwanda): At Airtel, 9 clients queue. After 4 served, who is front?
- Practical (Rwanda): At RRA, 7 citizens queue. Who is second served?
- Challenge: Queue vs stack for distributing laptops to students. Which works?
- Reflection: Why FIFO avoids bias in distributions?