

STACK

Q3.CHALLENGE:Reverse "STACKFIFO"USING STACK.

ANSWER:

Step1: Push each character onto the stack

Stack:['S','T','A','C','K','F','I','F','O']

Step 2:Pop each character from the stack and append to result.

Output after popping:['O','F','I','F','K','C','A','T','S']

REVERRSE STRING:"OFIFKCATS"

Q4.Why is stack bad for serving order?

Answer:

.Stack serves the last person first.

.People who came earlier wait longer.

.so, Stack is unfair for service because it ignores arrival time.

QUEUE

Q3.Queue vs stack for public transport boarding. Which is correct?

Answer: Queue, Because people board in order of arrival. stack would be chaotic.

Q4.Why does FIFO ensure fairness in buses?

Answer:

.FIFO means first come, first served.

.It respects arrival time.

.It prevents line cutting.

.It promotes fairness, order, and equal treatment.