

Cora Programming Test

Description:

You are to build a mechanism which handles users in a queue.

A user cannot be in the queue more than once and the order of the queue by default is FIFO (First in, first out), you are dealing with a large-scale system in which many users could join the queue simultaneously.

Your Assignment:

Build a queue management class that has the following functionality:

Add

Receives a user to add to the queue, returns the user's position in the queue.

Remove by user

Receives a user and removes it from the queue.

Remove by position

Receives a queue position and removes the user at that position from the queue.

Move

Receives a start and ending position, moves the user from the start position to the ending position.

Switch

Receives two positions, switches the user from each position with each other.

Reverse

Reverses the order of the queue so the user in last position is now in first position.

Print

Prints the queue to stdout in the correct order, each position should be on a new line and the format per line should be "Position {position}: {user}"

File Structure

Your solution should include *at least* 2 files

- The queue management class (or classes)
- A main or test file(s)
 - Reads the contents of `actions.txt` and performs each action in sequence
 - The name of the action does not have to match your method name exactly, feel free to use any method names you wish as long as you implement the functionality listed in the previous section.
 - Each action should print to stdout *the action which was performed and if the action was successful or not*.

Notes

It is advised to spend up to 2 hours on this assignment, you are free to spend more time on this assignment if you share your thought process and reasoning for spending more time or any difficulties you experienced.

On completion of the assignment, please email back your deliverables as well as the test output based on the actions.txt file.

It is advised that you write everything from scratch, if you would like to use any vendor packages or frameworks please provide your reasoning for such when emailing your deliverables.

Please write your solution using any version of PHP and inform Cora of which version you used when emailing your deliverables.

Actions

ADD,1
ADD,2
ADD,3
ADD,4
ADD,5
ADD,6
REMOVE_USER,2
REMOVE_USER,6
REMOVE_USER,10
MOVE,3,1
REVERSE
SWAP,6,1

REMOVE_POSITION,3
REMOVE_USER,1
REMOVE_POSITION,6
ADD,7
ADD,8
PRINT