DESCRIPTION OF YOUR CODE

The code has two kinds of objects namely reader and writer.The reader reads the queue and displays it. Writer writes in the queue.There are two semaphores namely mutex and wrt. These act as locks to display mutual exclusion.When wrt lock is locked by the writer the writer writes in the queue and when the wrt lock is released then reader can read in the queue.As soon as the writer lock is released reader can read all the components except the component writer is currently writing.Multiple readers can enter the queue.The wrt lock ensures that at a time only one writer goes in the queue.After posting or notifying from the mutex lock the reader can read in the array.

I have stored the shared array as a queue.enqueue method is to enter elements in a queue. Printall is to add elements in the queue and those elements can be displayed. Printread is to read from the queue.The main creates all read and write threads according to the need of the user.

DESCRIPTION OF HOW TO COMPILE AND TEST THE PROGRAM

Write make and then write ./rw on the terminal to run the code.

THE INPUTS THE USER SHOULD GIVE

The user should only enter the number of reader and writer threads he wants to create.These numbers should be non negative and lie in the range of 1-50.

EXPECTED OUTPUT

1)The output will have the way the readers and writers are entering the array .
2)Reader will try to read from the array and display it.
3)Writer will successfully add in the array.

ERROR VALUES

1)There will be error if the number of threads entered by the user are more than 50 or less than 1.
2)There will be error if the number of threads entered is a negative number.
3)If the queue is empty and reader wants to read then it shows “queue is empty”.

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