

READERS - WRITERS PROBLEM

(Using Pipes or Message Queues)

AUTHOR: EMIL TITUS

(Roll #24)

Compiling the Program

To compile the program (on Linux):

```
gcc message_queue.c
```

Running the Program

In a terminal, run the program:

```
./a.out <number of readers> <number of writers>
```

For example,

```
./a.out 5 2
```

The numbers of readers and writers have to be non-negative.

If the program terminates prematurely, the message queue would become corrupted. The system would have to be rebooted or the message queue should be cleared manually, before subsequent runs.

Screenshots

```
kali@kali: ~/Desktop
File Actions Edit View Help
kali@kali:~/Desktop$ gcc mq.c
kali@kali:~/Desktop$ ./a.out 5 2
Creating 5 readers and 2 writers.
Initially, Shared Resource Value = 100.

Writer #2 modified the resource. Shared Resource Value = 101

Reader #5: Shared Resource Value = 101
Number of readers currently reading: 1

Currently no readers are reading.

Reader #4: Shared Resource Value = 101
Number of readers currently reading: 1

Reader #2: Shared Resource Value = 101
Number of readers currently reading: 2

Number of readers currently reading: 1

Reader #1: Shared Resource Value = 101
Number of readers currently reading: 2

Reader #3: Shared Resource Value = 101
Number of readers currently reading: 3

Number of readers currently reading: 2
Number of readers currently reading: 1

Currently no readers are reading.

Writer #1 modified the resource. Shared Resource Value = 102

kali@kali:~/Desktop$
```