

Computer Architecture and Operating Systems - Winter 2018

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October 15, 2019

Assignment 2

Due date: Oct 31, 2019. Time: 23:59 Hrs.

1 Multi-user chat system (Total points: 45)

You are required to design and implement a multi-user chat system that is like a real-time instant message board system, much like IRC. The users should be able to talk to one another and to everyone else. The system needs to make sure which message is meant for whom – for individual user or for everyone. The message meant for everyone should be flashed on the system for everyone to view. The messages meant for individual users need to be handled for the individual users themselves.

You may use popular Linux IPC mechanism for the same. For now, please ignore synchronization/race-condition prevention.

What To Submit

- Program source code with Makefile
- Write-up describing the following:
 - Description of your code and how you implemented the function – the logical and implementation details.
 - Description of how to compile and test the program
 - The inputs the user should give.
 - Expected output (and how to interpret it).
 - Error values and how to interpret them.

Grading Rubric

- Successful compilation your the program – 10 points.
- Correct functioning of the chat system for multi-users – 20 points.
- Correct handling of input errors (atleast two different types of errors should be handled) – 10 points.
- Description of the systems, test cases *etc.* – 5 points.

Late Submission Policy

- Submitted on or before Oct 31, 2019 (23:59 hrs) – No points deducted.
- Submitted after Oct 31, 2019 but on or before Nov 2, 2019 (23:59 hrs) – 5 points deducted.
- Submitted after Nov 2, 2019 but on or before Nov 4, 2019 (23:59 hrs) – 15 points deducted.
- Submitted after Nov 4, 2019 – no points shall be awarded.