

**CS 513 Software Systems (Module-1 System Software)**  
***Programming Assignment-1***

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1. Write an ANSI C program by which a child process is continuously writes messages that are taken from user (STDIN) and stores it in a file named (shared.txt) and the parent process reads continuously from the same file (if any updates) and displays it to the user (STDOUT). [4 Marks]

2. Assume we have multiple servers which generates logs, thus we have to build a concurrent, consistent log manager that allows to read all logs, read by log Id. and also to write/append logs and persist these logs in linux file system.

Now, write an ANSI C program that simulates the above log manager. [6 Marks]

Also, assume that each log entry / record has the following,

**Attributes:**

*LogId, Timestamp, Status / Log Type {ERROR, WARNING, SUCCESS, etc.,}, Log Message.*

Target-1: Implementation of boiler plate code of all these 3 functions

Target-2: Adding File Locking Functionality and overall working.

Note:

1. **DO NOT USE** any(wherever applicable) Library function, Not even printf().
2. **ONLY** use system calls.
3. **SAY NO** to Copy/Paste/Refer from any sources of Information except Manual Pages.

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