Operating System Labs July-Dec-2017
Assignment 4

Exercise 1: Write a multithreaded program that creates two threads. One thread will read a file (pass its name from command line argument) one character at a time and the other thread will write this character in the output file (pass its name from command line argument. You need to synchronize these two threads so that the content of input and output files is same.

Exercise 2: Write a program that creates five threads. Out of the five threads two thread will be writer threads and remaining three threads will be reader thread. The reader thread will display a message with the thread number "reader thread 1 reading from database" whereas, write thread will display a message with thread number "writer thread 1 writing to the database". Each thread will repeat its activity five times. Synchronize the threads to maintain following output.

reader thread 1 reading from database
reader thread 1 reading from database
reader thread 1 reading from database
reader thread 1 reading from database
reader thread 1 reading from database
writer thread 1 writing to the database
writer thread 1 writing to the database
writer thread 1 writing to the database
writer thread 1 writing to the database
writer thread 1 writing to the database
reader thread 2 reading from database
reader thread 2 reading from database
reader thread 2 reading from database
reader thread 2 reading from database
reader thread 2 reading from database
writer thread 2 writing to the database
writer thread 2 writing to the database
writer thread 2 writing to the database
writer thread 2 writing to the database
writer thread 2 writing to the database
reader thread 3 reading from database
reader thread 3 reading from database
reader thread 3 reading from database
reader thread 3 reading from database
reader thread 3 reading from database