

## **Programming Assignment 1 (10 pts, Due at 5pm, Feb. 19, Thu.)**

Build a client/sever system for movie information retrieval using TCP sockets, which must be able to handle multiple concurrent connections. Please use unix system call "fork" to create a child process to serve an incoming connection in the server. The server maintains the latest movie information in a file "movie.txt" (posted on the blackboard). In the client program, whenever a user inputs a movie title (or part of it), the client program sends the inquiry to the server program, the server program searches the file, finds a match and returns the corresponding information (Rank, Title, Box Office) to the client program such that the user can see it on the screen. If the input text does not match any title in the file, display "No results found!". The user should be able to make such an inquiry multiple times during the lifetime of a connection.

Note that:

- 1) Test both your server and client programs in a single machine, and use IP address "127.0.0.1" (local host) as the server's IP address and port number "12345" for this service.
- 2) For the grading purpose, you MUST write your programs using C/C++ and put the source code for the client and server programs in files called "client1.c" and "server1.c" respectively. And, you MUST make sure that your programs work on the programming environment that TA described in the recitation.
- 3) You MUST submit the source code files as a single zip file (with the name of "YourLastName-FirstName-PA1.zip") to the blackboard before the deadline. Moreover, you need to bring a hard copy of your source code to me in the class on February 19. You may be asked to demo your programs by the TA.
- 4) You MUST write your own programs. Copying codes from others or some online sources may result in serious consequences!!!