**A client server socket program in C. The program should has the following features.**

1. **Client program:**
    a. **Sequential client:** Each client generates 20 requests; Each request consists of an integer, i.e., $i^{th}$request is an integer “i” ranging from 1 to 20; display the received response on the terminal; close the connection after 20 requests.
    b. **Concurrent client:** For designs 2(b), 2(c), and 2(d), the client program is a multithreaded program that generates concurrent requests. For example, if we want 10 concurrent client programs, the client code should run 10 parallel threads.
2. **Server program:** opens a new file when the first client connects; for each client request: compute the factorial of the received number; store the result along with client-id (IP address, port number) in the file and also send the result back to the client; close the file when all the client connections is closed.

    **Design the following server programs**

    a. Sequential server program.
    b. Concurrent server program with multiple processes (using fork system call)
    c. Concurrent server program with multiple threads (using pthreads)
    d. Non-blocking server that can manage total 10 clients
        i. Using select() system call
        ii. Using poll() system call
        iii. Using epoll API