

CL205 - Operating Systems Lab

Task#03

Q1. Write a C/C++ program to emulate a chat application. Write it in a way that each process has his turn of writing a message, For Example:

```
P1: Hello  
  
P1 Says: Hello  
  
P2: Hi!  
  
P2 Says: Hi!
```

The program should run until the user closes the terminal.

Q2. Will you be able to write a separate programs that communicate the same way as the one given to you in **Q1**? If yes then provide the code otherwise write the reasons due to which it is not possible.

Q3. In a c/c++ program create a process using the fork() system call & do the following:

The parent process asks the user for a number and writes that integer to a file.

The child process then calculates the factorial of the integer and writes the result to the same file.

The parent process prints the result.

Q4. Design a file-copying program named FileCopy using pipes. This program will be passed two parameters: the first is the name of the file to be copied, and the second is the name of the copied file. The program will then create an ordinary pipe and write the contents of the file to be copied to the pipe. The child process will read this file from the pipe and write it to the destination file. For example, if we invoke the program as follows:

FileCopy input.txt copy.txt

the file input.txt will be written to the pipe. The child process will read the contents of this file and write it to the destination file copy.txt.