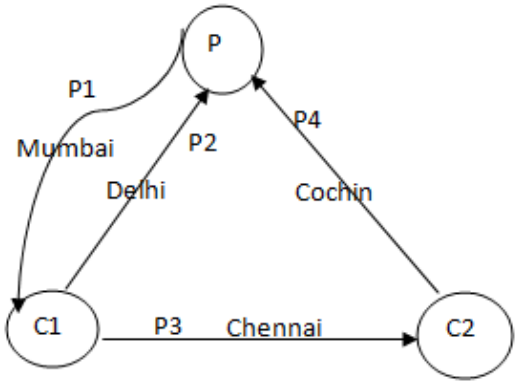
College of Engineering, Pune
Dept of Computer Engineering and Information Technology
Year (Final B.Tech)
(CT405)- **Advanced Unix Programming (AUP)**
Lab 10

Write a program to implement the following:

1. A pipe setup is given below that involves three processes. *P* is the parent process, and *C*1 and *C*2 are child processes, spawned from *P*. The pipes are named *p*1, *p*2, *p*3, and *p*4. Write a program that establishes the necessary pipe connections, setups, and carries out the reading/writing of the text in the indicated directions.



2. Let P1 and P2 be two processes alternatively writing numbers from 1 to 100 to a file. Let P1 write odd numbers and p2, even. Implement the synchronization between the processes using FIFO.
3. Implement a producer-consumer setup using shared memory and semaphore. Ensure that data doesn't get over-written by the producer before the consumer reads and displays on the screen. Also ensure that the consumer doesn't read the same data twice.