**Operating System**

**Lab Report 8**

**Hafiz Ahmad**

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**Section-6A2**

Named Pipes

**INTRODUCTION:**

Named pipes provide interprocess communication between a pipe server and one or more pipe clients. They offer more functionality than anonymous pipes, which provide interprocess communication on a local computer.It is an extension to the traditional pipe concept on Unix. A traditional pipe is “unnamed” and lasts only as long as the process. A named pipe, however, can last as long as the system is up, beyond the life of the process. It can be deleted if no longer used. Usually a named pipe appears as a file, and generally processes attach to it for interprocess communication. A FIFO file is a special kind of file on the local storage which allows two or more processes to communicate with each other by reading/writing to/from this file. A FIFO special file is entered into the filesystem by calling mkfifo() in C. Once we have created a FIFO special file in this way, any process can open it for reading or writing, in the same way as an ordinary file. However, it has to be open at both ends simultaneously before you can proceed to do any input or output operations on it. Reading from or writing to a named pipe occurs just like traditional file reading and writing; except that the data for named pipe is never written to or read from a file in hard disk but memory.

**OBJECTIVES:**

• Learn and Understand InterProcess Communication using implementation of named pipes

**Application:**

Named pipes can be used to provide communication between processes on the same computer or between processes on different computers across a network. If the server service is running, all named pipes are accessible remotely.

Named pipes is a windows system for inter-process communication. In the case of SQL server, if the server is on the same machine as the client, then it is possible to use named pipes to tranfer the data, as opposed to TCP/IP.

Named pipes are also a networking protocol in the Server Message Block (SMB) suite, based on the use of a special inter-process communication (IPC) share. SMB's IPC can seamlessly and transparently pass the authentication context of the user across to Named Pipes.

Named pipes are only 16% better than TCP sockets.

**Issues:**

No issue found regarding this lab.

**Conclusion:**

In this lab we that how to communicate between two process using named pipes. nterprocess communication (IPC) is used for programs to communicate data to each other and to synchronize their activities. Semaphores, shared memory, and internal message queues are common methods of inter process communication