**Assignment No.7**

**Write-up**

7. Inter process communication in Linux using following.

* What is IPC?
* Different techniques of IPC.

a. **Pipes:** Full duplex communication between parent and child processes. Parent process writes a pathname of a file (the contents of the file are desired) on one pipe to be read by child process and child process writes the contents of the file on second pipe to be read by parent process and displays on standard output.

* What is PIPE?
* Execution of IPC on shell.
* Pipe system calls.
* Read (), write (), close (), open () with different modes, STDIO\_FILENO, STDIN.

b. **FIFOs:** Full duplex communication between two independent processes. First process accepts sentences and writes on one pipe to be read by second process and second process counts number of characters, number of words and number of lines in accepted sentences, writes this output in a text file and writes the contents of the file on second pipe to be read by first process and displays on standard output.

* What is FIFO?
* Execution of fifo on shell.
* mkfifo () ,mknod() , unlink().
* Difference between named pipe and unnamed pipe.
* Difference between file pointer and file descriptor with standard I/O example.

c. **Signals:** Detecting the termination of multiple child processes: Implement the C program to demonstrate the use of SIGCHLD signal. A parent process Creates multiple child process (minimum three child processes). Parent process should be sleeping until it creates the number of child processes. Child processes send SIGCHLD signal to parent process to interrupt from the sleep and force the parent to call wait for the Collection of status of terminated child processes.

* What is signal?
* Difference between signal and interrupt.
* List of signal with integer value and description.
* signal(), kill() , raise().