

Assignment 1 pipe.c

WAP to create two child process which will execute command (with or without options) passed through command-line arguments. First child will pass output to second child as input.

Pre-requisites:-

- Knowledge about system calls, How to read and understand 'man pages'.
- Good knowledge about processes and IPC.
- Working of pipe & dup system calls.

Objective: -

- To understand working of pipe between two process.

Requirements: -

1. Create two child process and execute commands passed from command-line arguments
2. Each command is separated by a '|' (pipe) character.
3. First child execute first command (with or without options) and pass o/p to next.
4. Second child executes second command (after '|') will reads I/p from first cmd.
5. Parent will wait for both child process to finish .

Sample execution: -

1. `./pipe` (No arguments)
Error: No arguments passed
Usage: `./pipe <command 1> | <command 2>`
2. `./pipe ls`
Error: Insufficient arguments passed
Usage: `./pipe <command 1> | <command 2>`
3. `./pipe ls '|' wc`
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4. `./pipe ls -l -a '|' wc -l -w`
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Assignment 2 three_pipes.c

WAP to implement `ls -l | grep "patern" | wc -l` where pattern passed through command-line arguments.

Pre-requisites:-

- Knowledge about system calls, How to read and understand 'man pages'.
- Good knowledge about processes and IPC.
- Working of pipe & dup system calls.

Objective: -

- To understand working of multiple pipes between multiple process.

Requirements: -

1. Create three child process and execute commands passed from command-line arguments
2. Each command is separated by a '|' (pipe) character.
3. First child execute first command (`ls -l`) and pass output to next command.
4. Second child executes second command (`grep pattern`) where pattern passed from command-line arguments.

5. Third child executes wc -l

Sample execution: -

1. `./three_pipes` (No arguments)
Error: No arguments passed
Usage: `./three_pipes <command 1> | <command 2>`
2. `./pipe ls -l '|' grep`
Error: Insufficient arguments passed
Usage: `./pipe <command 1> | <command 2>`
3. `./pipe ls -l '|' grep "pattern" | wc -l`
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