

PROGRAM 2

Can P2 read from the file abc using fp?

When a process P1 opens a file for reading and then forks to create a child process P2, both P1 and P2 will have access to the file and can read from it. The file pointer (fp) in P1 will be duplicated in P2, so P2 will also have access to the file through fp.

If P2 can read from abc then from which position in the file abc will it read?

The position in the file that P2 will start reading from will depend on the current position of the file pointer in P1 at the time of the fork. If P1 has not yet read from the file, P2 will start reading from the beginning of the file. If P1 has read some data from the file, P2 will start reading from the point in the file where P1 left off.

If P1 and P2 both attempt to read from abc then what will they read?

If P1 and P2 both attempt to read from the file at the same time, they may end up reading different data depending on the current position of the file pointer in each process. If they are reading sequentially, they will read different sections of the file. However, if they are reading the same position, the behaviour will be dependent on the file system and OS. Some OS may lock the file, some may read the same data, some may read the stale data (the data present before other process read that).

If P1 closes the file (fclose()) does it get closed for P2 as well?

If P1 closes the file using fclose(), the file will be closed for P1 but it will remain open for P2. P2 will still have access to the file through the file pointer, and it can continue to read from the file. However, when P2 is done reading from the file, it should also close the file with fclose() to prevent any potential issues.