CSE344-System Programming HW2 Report

Yusuf Fatih Şişman

171044017

Handling of Signals

To prevent race condition I started child processes with sigsuspend. They are wait signals from parent to start. All of the children works by one by. When a child done his current job, send signal to parent. This signal increment a counter. While this counter smaller than 8, parent call sigsuspend. Every time that parent woke up, it send signal to next child and call sigsuspend and wait signal from current child to wake up.

Write to File

When I try to find the position to write with lseek and write to the position, same amount of writed characters are deleted. For prevent this situation, I create a buffer with 1024 char size and fill it with all characters after the current location of cursor. Then I write the wanted characters and then rest of file again. And this operation solved the problem.

Lagrange Polynomial Codes

I taked the code of Lagrange's Interpolation from geeksforgeeks.

https://www.geeksforgeeks.org/lagranges-interpolation/

I taked the code of calculating the coefficients from stackoverflow.

https://stackoverflow.com/questions/9860937/how-to-calculate-coefficients-of-polynomial-using-lagrange-interpolation/61265513#61265513

Achieved Requirements

- Synchronization between process with only using signals.
- Update file with calculated values.
- CTRL-C signal is handled.

- I think parent process clean up all its children but not sure.