Signaler Design-Plan

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1 Project Summary

A program that prints out increasing prime numbers to standard output, approximately one every second.

2 Architecture

2.1 Data

None.

2.2 Significant Functions

void gen_primes(void)

Creates threads for printing and generating prime numbers.

void reverse_prime(int sig)

Thread function for reversing the order in which prime numbers are generated.

void skip_prime(int sig) Thread function for skipping the next prime in the sequence.

void restart_prime(int sig) Thread function for restarting the prime number.

void *print_thread(void *n) Thread function for sleeping the and printing prime number.

void *work_thread(void *n) Thread function to generate next prime number.

bool is_prime(size_t n) Function that checks if a number is prime. Code borrowed from https://www.geeksforgeeks.org/program-to-find-the-next-prime-number.

size_t next_prime(size_t N) Function that gets the next prime number is sequence. Code borrowed from https://www.geeksforgeeks.org/program-to-find-the-next-prime-number.

int handle_args(int argc, char **argv)

This function will handle command line arguments.

void print_help(void) This function prints the usage statement.

3 Plan

Get prime number generated in a way that works with the requirements. Work on handling the signals SIGHUP, SIGUSR1 and SIGUSR2. Then begine working on the bonus features.