1 COMMANDS

Log of commands:

- mkdir /scratch/fall2015/cs444-24; cd /scratch/fall2015/cs444-24

- git clone git://git.yoctoproject.org/linux-yocto-3.14

- cp /scratch/opt/environment-setup-i586-poky-linux .

- cd linux-yocto-3.14; source ../environment-setup-i586-poky-linux

- cp /scratch/spring2015/files/config-3.14.26-yocto-qemu ./.config

- make -j4

- qemu-system-i386 -gdb tcp::5524 -S -nographic -kernel arch/i386/boot/bzImage -drive file=core-image-lsb-sdk-qemux86.ext3,if=virtio -enable-kvm -net none -usb -localtime –no-reboot –append "root=/dev/vda rw console=ttyS0 debug".

- $GDB

- target target remote :5524

2 REFLECTIONS

1. I think the point of the assignment was to refresh us on using pthreads and to get us thinking in concurrency.
2. I approached the problem piece by piece. First, how to create a thread, then buffer implementation, proudcer implementation, consumer implementation, random number generation, then handling of the full and empty buffers. This piece by piece approach made the algoriths/constructs fall into place.
3. I tested by running the program as normal, but also testing the extremes. I filled the buffer with items and then tried to add onother to test the blocking when the buffer is full, and did the opposite to test when the buffer is empty. I also tested on different platforms to make sure the random number generation was handled correctly.
4. I (re)learned about pthreads. I also leared about including asm inline, and the basics of concurrecy programming.

Detail	Author	Description
1ca4174	Your Name	Added linux kernel
15a4c12	Your Name	Added concurrency
d4c0a88	Taylor Fahlman	Makefile: Added make file will the most common flags for style and debugging. Used
e2d0eed	Taylor Fahlman	Makefile and assignment1.c update
4d9e3d8	Taylor Fahlman	Filled general outline of produce function
2244c72	Taylor Fahlman	Assigned buffer pointer correctly to the address of the item with dummy values
607fa54	Taylor Fahlman	Filled consume function
f4facc9	Taylor Fahlman	Fixed compile issues
6445be5	Taylor Fahlman	Added sleep and print in consume function
4b56781	Taylor Fahlman	Changed the buffer to be a pointer to an array of 32 buffer items
2c5734f	Taylor Fahlman	Updated assignment 1
5d9edbd	Taylor Fahlman	Removed unneeded semaphore .h¿
209f751	Taylor Fahlman	Added comments for placeholders and fixed print statement
d09e230	Taylor Fahlman	Changed the global buffer to a struct
7ff17bd	Taylor Fahlman	Outlined needed steps in produce
c5c13a9	Taylor Fahlman	Changed pthread create functions to not segfault
50cf977	Taylor Fahlman	Changed global buffer pointer to a variable. Changed reference to it so that it could
050904e	Taylor Fahlman	Added mutex init, and locking/releasing on produce
7249be0	Taylor Fahlman	Fixed issues with printing to stdout
2274e68	Taylor Fahlman	Added mutex lock/unlock to consumer
29e0fd1	Taylor	Added signal catch and reimplemented buffer as queue
a4f7c99	Taylor	typo fixes
95628a0	Taylor	Added signal.h so signals can work
1a04be2	Taylor	Added random number generation function
4d08be2	Taylor Fahlman	Moved function defintions to correct place
a61e632	Taylor Fahlman	Removed return that will never be executed
12d413c	Taylor Fahlman	Added CPUID definition and fixed compiler errors and warning about function defini
97b39eb	Taylor Fahlman	Corrected CPUID define to differ from other global variables. Added rdrand generate
056005c	Taylor Fahlman	Fixed cpuid function
f927d9b	Taylor Fahlman	Fixed prototype of number generator function
4bcd392	Taylor Fahlman	Added pthread condition variables, and fixed rdrand macro
6bc6226	Taylor Fahlman	Added blocking on full or empty buffer. Added calls to random number generation.
8e614a9	Taylor Fahlman	Added mersene twister generation. Added more cleanup in the signal catch. Moved p
9fb3e85	Taylor Fahlman	Added mersene twister files
0078163	Taylor	Removed producer sleep time because I couldn't get it to work
6a7edbe	Taylor	Fixed blocking on full buffer
c96174c	Taylor Fahlman	Fixed tabbing
629da73	Taylor Fahlman	Merge branch 'master' of https://github.com/fahlmant/cs444
2d45427	Taylor Fahlman	Added writeup skeleton
27eb373	Taylor Fahlman	Added bash file to transform gitlog to latex. Added in makefile targets