

Project 1

CS444 - Spring 2017

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Abstract

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1 COMMAND LOG

- 1) ssh os-class
- 2) cd /scratch/spring2017/13-06
- 3) git clone git://git.yoctoproject.org/linux-yocto-3.14
- 4) cd linux-yocto-3.14
- 5) git checkout v3.14.26
- 6) source /scratch/opt/environment-setup-i586-poky-linux.csh
- 7) cp /scratch/spring2017/files/config-3.14.26-yocto-qemu.config
- 8) make menuconfig
- 9) /LOCALVERSION
- 10) 1
- 11) edit value to: -13-06-hw1
- 12) make -j4 all
- 13) cd ..
- 14) gdb
- 15) in terminal 2: source /scratch/opt/environment-setup-i586-poky-linux.csh
- 16) cp /scratch/spring2017/files/bzImage-qemux86.bin.
- 17) /scratch/spring2017/files/core-image- lsb-sdk-qemux86.ext3 .
- 18) qemu-system- i386 -gdb tcp::5601 -S -nographic -kernel bzImage-qemux86.bin -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"
- 19) in terminal 1: target remote :5601
- 20) continue
- 21) for username type: root
- 22) uname -a
- 23) reboot
- 24) qemu-system- i386 -gdb tcp::5601 -S -nographic -kernel linux-yocto- 3.14/arch/x86/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"
- 25) target remote :5601
- 26) for username type: root
- 27) uname -a
- 28) reboot
- 29) q

2 CONCURRENCY SOLUTION

The main point of the assignment is to create a program that prevents the producer-consumer problem from occurring. In detail there are

3 QEMU COMMAND-LINE FLAGS

- -gdb tcp::5601 - Open a GDB server on TCP port 5601
- -S - Do not start the CPU at startup.
- -nographic - Disables graphical output so that QEMU is a command line operation.
- -kernel linux-yocto-4.14/arch/x86/boot/bzImage - Uses this bzImage as a kernel image.
- -drive file=core-image-quemux86.ext3 - Defines a new drive with the file option set.
- if=virtio
- -enable-kvm - Enables KVM virtualization report.
- -net none - Indicates that no network devices should be configured.
- -usb - Enables the USB driver.
- -localtime - Gives the local time.
- - no-reboot
- - append "root=/dev/vda rw console=ttyS0 debug" - Uses the argument as the kernel command line.

4 VERSION CONTROL LOG

5 WORK LOG