

# ASSIGNMENT 1 WRITE UP

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CS444 FALL 2017

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## **Abstract**

In this document, we go over the different parts of assignment 1. We will go over the steps needed to perform the request actions as required by the assignment. Then, we explain the different flags part of the qemu command-line statement. Then, we will discuss our solution to the concurrency problem answering all the required questions. Finally, we include our version control and work logs.

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## 1 LOG OF COMMANDS

List of commands:

```
cd ../../../../scratch/fall2017
mkdir 27
cd 27
git init
git clone git://git.yoctoproject.org/linux-yocto-3.19
cd linux-yocto-3.19
git checkout tags/v3.19.2
git remote set-url origin https://github.com/sharma-akash/OS2
cd ../../../../files
source environment-setup-i586-poky-linux.csh
cp bzImage-qemux86.bin ../fall2017/27
cp core-image-lsb-sdk-qemux86.ext4 ../fall2017/27
cp config-3.19.2-yocto-standard../fall2017/27/linux-yocto-3.19
cd ../fall2017/27/linux-yocto-3.19
mv config-3.19.2-yocto-standard .config
make -j4 all
cd ..
qemu-system-i386 -gdb tcp::5527 -S -nographic -kernel bzImage-qemux86.bin -drive file=core-image-lsb-sdk-qemux86.ext4,if=virtio
-enable-kvm -net none -usb -localtime --no-reboot --append "root=/dev/vda rw console=ttyS0 debug
Open new window and connect to the server
Gdb
Target remote :5527
Continue
```

## 2 QEMU COMMAND-LINE FLAGS

- gdb tcp::??? Initialize a GDB stub at port ???
- S Manually start the CPU
- nographic No graphics for Qemu, only command line
- kernel Set the kernel file image
- drive Add a drive, we add from a file
- enable-kvm Enable KVM virtualization
- net Configure network devices, we set none
- usb Enable usb to add usb devices
- localtime Set what the current time is for the kernel
- no-reboot Don't reboot, just exit

**-append** defines the command line for the kernel

### 3 CONCURRENCY WRITE UP

lmao

### 4 VERSION CONTROL LOG

e9411b8	Added Makefile, mersenne, some small changes
ce34cbb	removing temp file
f12ca65	initial commit for concurrency code
b108951	Adding code_repo

### 5 WORK LOG

10/5 - Created the folder for the group, pulled the code and created a repo

10/6 - Built the kernel, ran the VM

10/7 - Started working on concurrency code

10/8 - Implemented mersenne, continued working on other parts of concurrency