

xv6: Resources

Prerequisite tools: <https://pdos.csail.mit.edu/6.828/2022/tools.html>

Cloning codebase:

```
git clone https://github.com/shuaibw/xv6-riscv --depth=1
```

Compile and run (from inside xv6-riscv directory):

```
make clean; make qemu
```

Generating patch (from inside xv6-riscv directory):

```
git add --all; git diff HEAD > <patch file name>
```

```
e.g.: git add --all; git diff HEAD > ../test.patch
```

Applying patch:

```
git apply --whitespace=fix <patch file name>
```

```
e.g.: git apply --whitespace=fix ../test.patch
```

Cleanup git directory:

```
git clean -fdx; git reset --hard
```

Explanation of source code (Not required for this course, but you may want to go through it):

https://www.youtube.com/watch?v=fWUJKH0RNFE&list=PLbtzT1TYeoMhTPzyTZboW_j7TPAnjv9XB

Random Number Generation

You will also need to figure out how to generate (pseudo)random numbers in the kernel; you can implement your own random number generator or use any off-the-shelf implementation from the web. You must make sure that the random number generator uses a deterministic seed (so that the results will be reproducible) and is implemented as a kernel-level module.