

Online on xv6 - System Call

Section: B1

Time: 20 minutes

Our favourite os xv6 doesn't have any built-in pseudo-random number generator. In this online, you will add a simple mechanism for generating random numbers.

Formally add 2 **system calls**.

1. `setSeed(int)` : sets the seed for a pseudo-random number generator.
2. `getRandomNumber()` : returns the next random number and updates the internal state.

For ease of implementation, we will use a simple `getRandomNumber()` where calling it will increase the seed by 1 and return it.

You also need to add 2 user commands.

1. `seed n`
2. `next`

See the sample I/O for clarification:

```
$ seed 2
The seed has been set to 2
$ next
Next random number is 3
$ next
Next random number is 4
$ seed 12
The seed has been set to 12
$ next
Next random number is 13
$ next
Next random number is 14
```

Submission:

```
git add --all
git diff HEAD > ../{studentID}.patch
```