

Luke Ruter & Theodore Thibeault

Operating Systems

Extension of xv6 Report

This is a modification of the xv6 operating system with the addition of multiple users. There is one default user root, with no password. There is one default TTY session. Upon successfully logging in with root, password can be set using passwd. passwd does not take any arguments, and sets or changes the password of the current user. The current user is stored in the file: “/utmp”. The current user can be obtained running the command “w”. Upon logging in, new users can be added with: “adduser [username]”. You can switch users using the su command “su [username]”. Upon exiting qemu, the changes made will persist until “make qemu” is run again.

Following are example of code execution:

```
init: starting sh
Username: root
Password:
Welcome!
```

Upon startup, the user is prompted to login. By default the only present user is root, with a blank password.

```
[root] $ useradd luke
User luke succesfully added
```

At any time another user can be made with the command “useradd [username]”.

```
[root] $ su luke
password:
Welcome!
[luke] $
```

In user-space, you can change shells to a different user with command “su [username]”. You will be prompted to enter the password, which will be blank if no password has been set.

```
[luke] $ passwd  
new password: 12345  
Successfully changed password
```

In an active shell, you can set the current user's password using passwd.

```
[root] $ su luke  
password: 12345  
Welcome! _
```

*After setting the password, it is permanent, and is required to
change to that user at any point in the future.*