

To make the personal message, I went to the reptilian kernel core at `/usr/rep/src` and I ran my `grep` command searching for “Booting the kernel...”, but case sensitive because running it case insensitive gives too many results & running it case sensitive gives only two files that matched: one from `arch/x86/boot/compressed/misc.c` and another from `arch/m32r/boot/compressed/misc.c`. I knew the `misc.c` file under the `/x86/boot/compressed/misc.c` was correct because `debug_putstr` actually prints out the contents of its message to the screen. Also, the Reptilian kernel runs on Android x86. Even more, the lines inside file correspond to the text shown in the screenshot provided in the project specification. So, I opened `misc.c` with `nano` and scrolled all the way down to find the “Booting the kernel...” text. There, I put my personal message with the appropriate spacing. Then, I saved the file, ran the commands to create my patch file, and then built my kernel with the “make” commands.

To be able to put my name as the default option in the GRUB Menu, I realized that to access the GRUB Menu, I should probably use `grep` in the farthest directory possible (a.k.a. `cd /`) to find all files with “Reptilian 18.01-A7”. Well, the first time I ran it, I received a lot of files that had the status of “permission denied,” mainly in the `/mnt`, `/proc`, `/etc`, or `/dev` directories (particularly `/proc` – it carried over 2000 tasks). To avoid this, I ran a “`sudo grep`” command, and then I found matches in the `mnt/sysroot/grub/` directory, specifically in the `menu.lst` file (I realized later that `sudo` wasn’t needed). Then, I opened `menu.lst` with `nano`, wrote my name as the default option, saved my changes, and rebooted my VM with video capture to see my modifications to the GRUB Menu.

To test my personal kernel modifications, I opened a local bash terminal and used the `sftp` protocol to connect into the VM. From there, I went into the `cd /usr/rep/src/reptilian-kernel` (where `p0.diff` is) and saved the file locally. Then, in a previous kernel snapshot, I “`git apply p0.diff`” and then I built the kernel from the source and installed it into the OS. I rebooted my VM with video capture and successfully saw my changes.