

Dylan Johnson - ARM AArch64 JOS

In my lab X project I translated Lab 1 of JOS to AArch64 while keeping the i386 implementation intact. I chose this project because of my familiarity with ARM and its ISA. Additions to JOS included a new entrypoint for the kernel, separating the x86 specific code from generic code, and modifying the makefiles to create an ARM compatible kernel image. The most difficult aspect of the project was separating the x86 specific code from the generic code such that there was no code duplication between architectures. I did run into a few small roadblocks such as getting the page table to work correctly and enabling floating point operations, but after studying the ARM Architecture Reference Manual these problems were fixed with little frustration. If I had more time, I would've continued the translation into lab 2 and so on. The code has been pushed to my gitlab account at the following address:
https://gitlab.cs.washington.edu/dgj16/jos_multiarch