CMSI 387-01

OPERATING SYSTEMS

Spring 2014

Assignment 0311 Feedback

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http://my.cs.lmu.edu/~mmoualle/ubuntu-kernel-howto

1a — Your work demonstrates strong command line proficiency at this point. (**+**)

2a — Your instructions are generally correct and the patch you supplied did (eventually) produce a working kernel, but some aspects of your work detract from this accomplishment. First off, your how-to page is replete with typos: "kernal," "destory," "uniustd_32.h," a missing image, "Resart," "shurtdown," etc. Especially with respect to the missing image, it appears that you did not even bother to double-check your web page after uploading it to *my.cs.lmu.edu*.

Further, your how-to page has a significant inconsistency—you talk about using `ubuntu-oneiric`, but the resulting Linux kernel version is 2.6.18. Bzzzzt—wrong! If your how-to page were truly based on stuff that you actually did, this kernel version would have been 3.0.x and not 2.6.18. Your code, as delivered, also had a significant typo—"kernal" is misspelled even in the patch—and thus could not have possibly worked. Finally, your claimed `uname -r` output which includes a "blarkar" config is inconsistent with what your patch produced (after "kernal" was fixed). Again, there is either a gap in your documentation or a gap in your kernel-building work. All of these glitches cast some doubt on whether you actually built and installed the kernel with your custom system call successfully. (**/**)

2b — You successfully defined an implemented a new system call, after the "`kernal.h`" typo was fixed. But you have already been hit with this in *2a*. Still, with respect to adding a system call, your how-to page exposes one question mark—did you notice that your final system call was 347, and yet the change you made to `unistd_32.h` gave it 341? I think it is fair to expect you to wonder about that (or at the very least notice it). Even better if you had figured it out, but the main idea here is to observe that this is a discrepancy in our understanding of things. Again, this detracts from your demonstration that you fully understand what is going on here, and were not just blindly following someone else's instructions. (**|**)

4a — Despite the oddity of `unistd_32.h`, your code eventually worked, once the bad `#include` statement was fixed. But, that bad `#include` should never have been there, if this patch were really based on a successfully-built kernel. (**|**)

4b — The separation of concerns was pretty much dictated for you in this code base, but at least you did not break it **:)** (**+**)

4c — Your code was certainly easy to understand. It helped that there wasn't much of it **:)** (**+**)

4d — Your work shows some use of available documentation; however, as already noted, the numerous typos that were in your how-to page and the significant one in your actual patch put a damper on things. (**|**)

4e — Your single commit phase and message are conceivably appropriate for the task performed, but because that patch was itself broken there may be room for another commit or two. (**|**)

4f — Submitted one day late. (**|**)

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Updated feedback based on commits up to 2/25/2014; only re-evaluated outcomes are included:

2a — Congratulations on successfully building an operating system kernel! (+)

2b — Your instructions provide the right information for adding a new [64-bit] system call to the kernel (nicely chosen *xkcd* graphic there **:)**), presented nicely and well-executed in Bootstrap—not a "blarkar" in sight. You also provide the complete set of files (patch, demo program) referenced in your tutorial. Only one loose end—you should make this file replace the old one you have on *my.cs.lmu.edu*. You did this over well, so you should let the Web know. (+)

4a — Your patch is complete and correct. (+)

4d — You have acquired the correct information needed to define a new system call and create a patch for it. This information is presented well on your tutorial page. Again, make sure to upload it. (+)

4e — Commit frequency and messages are appropriate to the work done. (+)