**Project #3 Report**

**Part 1 – sys\_report\_process\_virtual.c**

The goal of this task was to print information about the virtual memory given a process\_id. We started by reading though linux kernel headers to find which struct we needed. It took a while but we finally found that though task, you have access to active\_mm which you can use to access all the data needed. We then setup a count and iterated though it, following the linked list. While this was happening, we printed the information needed and permissions the task had.

**Part 2 – sys\_vma\_props.c**

This task was almost like an extension to part 1. We use the mem address and pid as input for the system call. Once we found out about pgd\_offset, pud\_offset, pmd\_offset and pte\_offset\_kernel, we just needed to prent the data.

Part 3 – sys\_report\_page\_cache.c

This task required we loop though the linux LRU cache and the total number of pages. We found linux’s built in zone and lru iteration fuctions, then a list\_for\_each\_entry to loop though each page. Each page check if it is active or inactive and increments a counter. We also check if a page is referenced.