**Objectives**

In this lab, we modified our operating system (OS) to use a priority scheduler and blocking semaphores. Having a priority scheduler instead of round-robin allows us to give precedence to I/O bound tasks. Blocking semaphores reduce time wasted polling a semaphore. This lab also asked us to introduce a second periodic task with configurable priority. However, our OS already supported this. We also added more powerful logging and profiling measures and corresponding shell commands to help us debug and measure the OS. Additionally, we added an interrupt for the Down button which has the same functionality as the previously implemented Select button to run a user-specified thread.