

a) Problem set 9

09.01) **The value of the variable n is assigned to the parameter that is provided to the SVC supervisor call. This could be passed either via stack or via register - the latter of the two being a simple solution.**

09.02) **B.; C.; E.;**

09.03) **C.**

09.04) **A.; B.**

09.05) **C.; D.**

09.06) **A.; B.; C.**

09.07) **A.; B.; C.**

09.08) **C.**

09.09) **A.**

09.10) **A.**

b) Problem set 10

10.01) **A.**

10.02) **A.**

10.03) **B.**

10.04) **A.**

10.05) **A.**

10.06) **A.**

10.07) **A.**

10.08) **A.; B.**

10.09) **A.**

10.10) **A.**

c) Exercise 6.4

Since there is only one page table in hardware, consider using multiple user level page tables so that you do not have to save and switch page table addresses in the page map address registers as frequently.

The virtual memory manager may not be efficient. Improve the caching for the translation of the virtual addresses and you may see improvements.

The kernel might not switch threads efficiently. Consider rewriting and refactoring kernel code to ensure that all operations are being performed optimally.

Consider using a processor with more cores. This way, you do not have to switch threads as frequently and each user application will have more time running.