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CS 450 – Duan Yue

## Lab 4 – Memory Management

In exec.c we change the allocation to the one we want. Kernbase at top of stack with 2 pages. This makes the stack pointer to be Kernbase – 1. Thus, the user stack and page guard goes up to Kerbase – 2 \* pg size. There’s also a need to track the number of user stack pages so I added a new property called pages.

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So, in syscall.c, changes need to be made to fetchint, fetchstr, and argptr as there is a new boundary which is top of user stack. So need to change curproc -> sz.

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In vm.c, need to update copyuvm. As previously the virtual memory is from 0 to curproc -> sz. With the changes we have made, that memory now contains the code and the heap. So needs to update that with the correct one.

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In trap.c need to add a case for page fault, in which it allocates a new page only if the bad address is from the page right below the stack

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## Testing

For testing, I just used the test program given by the TA on the slides.

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