Lab 1: System Call Implementation

Add a new system call info(int param) that takes one integer parameter with value 1, 2 or 3. Depending on the value, it returns:

(1) A count of the processes in the system;

(2) A count of the total number of system calls that the current process has made so far;

(3) The number of memory pages the current process is using.

What to submit:

You need to submit the following:

(1) A zip file of the entire XV6 source code you modified

(2) A detailed explanation what changes you have made and necessary screenshots to show your work and results

(3) A detailed description of XV6 source code (including your modifications) about how the info system call is processed, from the user-level program into the kernel code, and then back into the user-level program.

Grades breakdown:

Correct implementation and demo of info() system call: 45%

- count of the processes in the system: 25%

- report the number of system calls this program has invoked: 15%

- report the number of memory pages the current process is using: 15%

Clear and detailed explanation of the changes made: 20%

Clear and detailed explanation of system call workflow: 15%