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CS460 Project 1

Part 1:

Essentially, an executed read() with no open files will exits with the value -1, but I will explain the process in detail below.

Here is a list of steps that start in a user program will call read(10, buf, n):

- 1. The user program will push n bytes.
- 2. Then, the user program will push a reference to buf, (&buf).
- 3. Before calling a system call, the items will be pushed on the stack (push fd).
- 4. The call to read() will be evoked.
- 5. The code for read will be put in a register.
- 6. Execute TRAP of the kernel (library will place arguments in registers to issue this TRAP).
- 7. The kernal will call the sys call handler.
- 8. Sys call handler evoked.
- 9. Read with user program.
- 10. Return to the caller.
- 11. Finally, increment the SP.

Part 2:

Converted files to implement sys call.