

CS50300: Operating System

LAB 0

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Task 2 Inspect XINU's first process

Modifications have been made accordingly in `system/main.c` file.

Task 3 Create a new system call

Declaration of system call `extern syscall hello(void)` has been done. System call `hello.c` has been implemented accordingly.

Task 4 Inspect the shell program

1. **sleep:** It's defined in `cmdtab` as `{"sleep", FALSE, xsh_sleep}`. It's not a built in command. It's implemented in `xsh_sleep.c`. It takes a number along with the shell command and delays for the specified number of seconds.

System Call: Invokes system call **sleep**

2. **kill:** It's defined in `cmdtab` as `{"kill", TRUE, xsh_kill}`. It's a built in command. It's implemented in `xsh_kill.c`. It takes the ID of a process to terminate and terminates a process if process id is valid and not null.

System Call: Invokes system call **kill**

3. **cat:** It's defined in `cmdtab` as `{"cat", FALSE, xsh_cat}`. It's not a built in command. It's implemented in `xsh_cat.c`. This command writes contents of files or stdin to stdout, it is a command to cat one or more files.

System Call: System call invoked are **open, close, getc, putc**

4. **clear**: It's defined in `cmdtab` as `{"clear", TRUE, xsh_clear}`. It's a built in command. It's implemented in `xsh_clear.c`. This command clears the console. Additional argument will not work.

System Call: There are no system calls directly invoked from `xsh_clear`

Task 5 Implement a new shell command

`hello` system call has been implemented as per requirement.