How to add a shell command:

<http://xinu.mscs.mu.edu/Shell>

Lets say we want to add a echo command that echo s the words that list after the command “echo”

1. Update include directory shell.h file include/shell.h to include prototype

command xsh\_echo(ushort stdin, ushort stdout, ushort stderr, ushort nargs, char \*args[])

1. Update shell/shell.c command table to include command as an entry

{echo, FALSE, xsh\_echo}

The second parameter says “FALSE” because echo is not a built-in function.

1. Add xsh\_command.c in the shell directory

Add xsh\_echo.c file in the shell directory.

Its content is as follows:

==============================================================================

/\*\*

\* @file xsh\_echo.c

\* @provides xsh\_echo

\*

\* $Id$

\*/

/\* Embedded XINU, Copyright (C) 2007. All rights reserved. \*/

#include <kernel.h>

#include <stdio.h>

#include <string.h>

/\*\*

\* Shell command echos input text to standard out.

\* @param stdin descriptor of input device

\* @param stdout descriptor of output device

\* @param stderr descriptor of error device

\* @param args array of arguments

\* @return OK for success, SYSERR for syntax error

\*/

command xsh\_echo(ushort stdout, ushort stdin, ushort stderr, ushort nargs, char \*args[])

{

int i; /\* counter for looping through arguments \*/

/\* Output help, if '--help' argument was supplied \*/

if (nargs == 2 && strncmp(args[1],"--help",6) == 0)

{

fprintf(stdout, "Usage: clear\n");

fprintf(stdout, "Clears the terminal.\n");

fprintf(stdout, "\t--help\t display this help and exit\n");

return SYSERR;

}

/\* loop through the arguments printing each as it is displayed \*/

for ( i = 1; i < nargs; i++ )

{

fprintf(stdout, "%s ", args[i]);

}

/\* Just so the next prompt doesn't run on to this line \*/

fprintf(stdout, "\n");

/\* there were no errors so, return OK \*/

return OK;

}

============================================================================

1. Update compile/Makefile to add the newly created shell file to be included in the compilation process.

In the SHL=…

add xsh\_echo.c

1. Compile and upload

cd compile

gmake

xinu-status

(find a free server: do not use the server name with a 1)

To upload:

mips-console server\_name

ex: mips-cosole moiz

1. If everything worked alright you will see xsh> prompt.
2. Type help to see “echo” listed as one of the shell commands
3. Type the command “echo” and some words. You will see the words you types echoed back.