

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[])
```

2. 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.

3. 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;
}

```

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

In the SHL=...

add xsh_echo.c

5. 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-console moiz

6. If everything worked alright you will see xsh> prompt.
7. Type help to see "echo" listed as one of the shell commands
8. Type the command "echo" and some words. You will see the words you types echoed back.