

# EJEMPLO 1: AÑADIR DRIVER HELLO WORLD

June 2, 2017

## Part I

# HelloWorld Source Code

```
/*
drivers/hello/hello.c
*/

#include <linux/module.h>      /* Needed by all modules */
#include <linux/kernel.h>      /* Needed for KERN_INFO */
#include <linux/init.h>        /* Needed for the macros */

static int __init hello_init(void) {
    printk(KERN_INFO "Hello, world\n");
    return 0;
}

static void __exit hello_exit(void) {
    printk(KERN_INFO "Goodbye, world\n");
}

module_init(hello_init);
module_exit(hello_exit);
```

## Part II

# Hello Kconfig

```
# drivers/hello/Kconfig
menu "Hello Drivers"
    config HELLO
        tristate "Hello World"
        default y
endmenu
```

## Part III

# Hello MakeFile

```
# drivers/hello/Makefile
obj-$(CONFIG_HELLO) += hello.o
```

## Part IV

# Drivers Kconfig

```
# drivers/Kconfig
menu "Device Drivers"
[... ]
source "drivers/hello/Kconfig"
endmenu
```

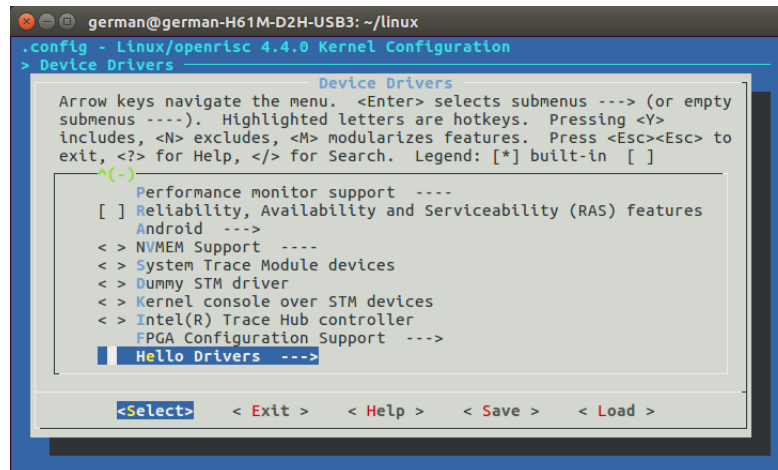
## Part V

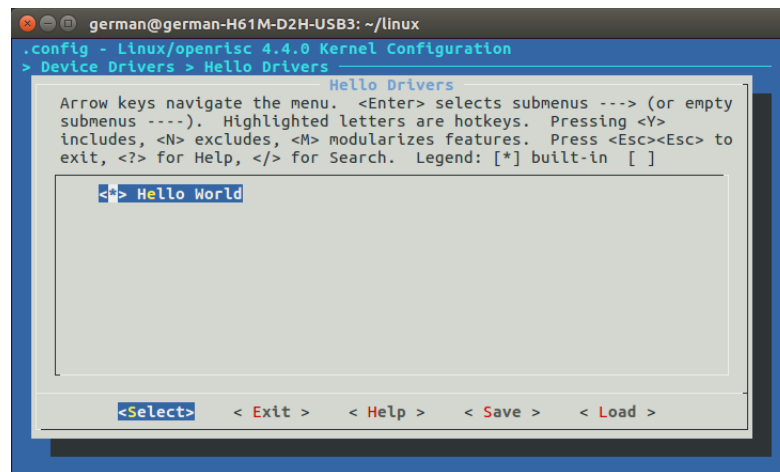
# Drivers Makefile

```
# drivers/Makefile
[... ]
obj-y += hello/
```

## Part VI

# ANEXO





```

-- icache disabled
-- dmmu: 64 entries, 1 way(s)
-- immu: 64 entries, 1 way(s)
-- additional features:
-- power management
-- timer
setup_memory: Memory: 0x0-0x2000000
Reserved - 0x01fff23c-0x00000da2
Setting up paging and PTEs.
map_ram: Memory: 0x0-0x2000000
On node 0 totalpages: 4096
free_area_init_node: node 0, pgdat c0355bd4, node_mem_map c0a6e000
  Normal Zone: 16 pages used for memmap
  Normal zone: 0 pages reserved
  Normal zone: 4096 pages, LIFO batch:0
tlb_miss_handler c0002160
dtlb_miss_handler c0002000
OpenRISC Linux -- http://openrisc.net
pcpu-alloc: s0 r0 d32768 u32768 alloc=1*32768
pcpu-alloc: [0] 0
Built 1 zonelists in Zone order, mobility grouping off. Total pages: 4080
Kernel command line: console=uart,mmio,0x90000000,115200
earlycon: Early serial console at MMIO 0x90000000 (options '115200')
bootconsole [uart0] enabled
PID hash table entries: 128 (order: -4, 512 bytes)
Dentry cache hash table entries: 4096 (order: 1, 16384 bytes)
Inode-cache hash table entries: 2048 (order: 0, 8192 bytes)
Sorting __ex_table...
Memory: 21864K/32768K available (2719K kernel code, 89K rdata, 608K rodata, 7144K init, 85K bss, 10904K reserved, 0K cma-reserved)
mem_init_done .....
NR_IRQS:32
clocksource: openrisc timer: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 95563022313 ns
40.00 BogoMIPS (lpj=200000)
pid_max: default: 32768 minimum: 301
Mount-cache hash table entries: 2048 (order: 0, 8192 bytes)
Mountpoint-cache hash table entries: 2048 (order: 0, 8192 bytes)
devtmpfs: initialized
clocksource: jiffies: mask: 0xffffffff max_cycles: 0xffffffff, max_idle_ns: 19112604462750000 ns
NET: Registered protocol family 16
clocksource: Switched to clocksource openrisc_timer
NET: Registered protocol family 2
TCP established hash table entries: 2048 (order: 0, 8192 bytes)
TCP bind hash table entries: 2048 (order: 0, 8192 bytes)
TCP: Hash tables configured (established 2048 bind 2048)
UDP hash table entries: 512 (order: 0, 8192 bytes)
UDP-Lite hash table entries: 512 (order: 0, 8192 bytes)
NET: Registered protocol family 1
RPC: Registered named UNIX socket transport module.
RPC: Registered udp transport module.
RPC: Registered tcp transport module.
RPC: Registered tcp NFSv4.1 backchannel transport module.
futex hash table entries: 256 (order: -2, 3072 bytes)
Serial: 8250/16550 driver, 4 ports, IRQ sharing disabled
90000000.serial: ttyS0 at MMIO 0x90000000 (irq = 2, base_baud = 1250000) is a 16550A
console [ttyS0] enabled
bootconsole [uart0] disabled
libphy: ethoc-mdio: probed
Hello, world
NET: Registered protocol family 17
Freeing unused kernel memory: 7144K (c0358000 - c0a52000)
/ #
/ # █

```