

```

int color;

#include "type.h"
#include "string.c"
// #include "queue.c" // use provided queue.obj during linking
// #include "kbd.c" // use provided kbd.obj during linking
#include "vid.c"
#include "exceptions.c"
#include "kernel.c"
#include "wait.c"

void copy_vectors(void) {
    extern u32 vectors_start;
    extern u32 vectors_end;
    u32 *vectors_src = &vectors_start;
    u32 *vectors_dst = (u32 *)0;

    while(vectors_src < &vectors_end)
        *vectors_dst++ = *vectors_src++;
}
int kprintf(char *fmt, ...);

void IRQ_handler()
{
    int vicstatus, sicstatus;
    int ustatus, kstatus;

    // read VIC status register to find out which interrupt
    vicstatus = VIC_STATUS; // VIC_STATUS=0x10140000=status reg
    sicstatus = SIC_STATUS;
    if (vicstatus & 0x80000000){
        if (sicstatus & 0x08){
            kbd_handler();
        }
    }
}

int body();

int main()
{
    color = WHITE;
    row = col = 0;

    fbuf_init();
    kbd_init();

    /* enable timer0,1, uart0,1 SIC interrupts */
    VIC_INTENABLE |= (1<<4); // timer0,1 at bit4
    VIC_INTENABLE |= (1<<5); // timer2,3 at bit5
    VIC_INTENABLE |= (1<<31); // SIC to VIC's IRQ31

    /* enable KBD IRQ */
    SIC_ENSET = 1<<3; // KBD int=3 on SIC
    SIC_PICENSET = 1<<3; // KBD int=3 on SIC

    kprintf("Welcome to WANIX in Arm\n");
    init();
    kfork((int)body, 1); //fork one process
    while(1){
        if (readyQueue)
            tswitch();
    }
}

```