#include <rtl.h>

#include <lpc21xx.h>

\_\_task void job1(void);

\_\_task void job2(void);

\_\_task void job3(void);

void extint0\_ISR(void)\_\_irq;

void serial(void);

void delay(unsigned int);

OS\_TID t1, t2, t3;

int p1=1, p2=0, p3 = 0;

unsigned int i, x, count = 0;

char c[2];

int main()

{

serial();

PINSEL1 |= 0x00000001; // EINT0 P0.16 - 01

EXTMODE = 0x00000001;

VICVectAddr0 = (unsigned long)extint0\_ISR;

VICVectCntl0 = 0x20|14;

VICIntEnable |= 0x00004000;

os\_sys\_init(job1);

}

void serial()

{

PINSEL0 |= 0x00000005;

U0LCR = 0x83;

U0DLL = 0x61;

U0LCR = 0x03;

U0IER = 0x01;

}

void extint0\_ISR(void)\_\_irq

{

//Updating Priorities

count++;

p2++;

p1 = 0;

p3 = 0;

EXTINT|=0X00000001; //Clear interrupt flag

VICVectAddr=0; // End of interrupt execution

}

\_\_task void job1(void)

{

t2 = os\_tsk\_create(job2,p2);

t3 = os\_tsk\_create(job3,p3);

t1 = os\_tsk\_self();

while(1)

{

os\_tsk\_prio(t1,p1);

os\_tsk\_prio(t3,p3);

os\_tsk\_prio(t2,p2);

}

}

\_\_task void job2(void)

{

while(1)

{

sprintf(c,"%d",count);

for(i=0; i<2; i++)

{

while(!(U0LSR & 0x20));

U0THR = c[i];

delay(10000);

}

while(!(U0LSR & 0x20));

U0THR = '\t';

delay(10000);

p1 = 0;

p2 = 0;

p3++;

os\_tsk\_prio(t2,p2);

os\_tsk\_prio(t1,p1);

os\_tsk\_prio(t3,p3);

}

}

\_\_task void job3(void)

{

IODIR0 = 0x00004000; //Buzzer (P0.14)

while(1)

{

if(count%2==0)

x = 2;

else

x = 1;

for(i=0; i<x; i++)

{

IOSET0 = 0x00004000; //Buzzer On

delay(1000000);

IOCLR0 = 0x00004000; //Buzzer Off

delay(1000000);

}

while(!(U0LSR & 0x20));

U0THR = '\n';

delay(1000);

while(!(U0LSR & 0x20));

U0THR = '\r';

while(!(U0LSR & 0x20));

U0THR = '\r';

delay(10000);

p3 = 0;

p2 = 0;

p1++;

os\_tsk\_prio(t2,p2);

os\_tsk\_prio(t3,p3);

os\_tsk\_prio(t1,p1);

}

}

void delay(unsigned int del)

{

unsigned int z;

for(z=0;z<del;z++);

}