

## **//C Programming to demonstrate EXTINT0 interrupt**

```
#include <lpc17xx.h>
void delay(uint32_t);

void EINT0_IRQHandler(void)
{
    uint32_t a;
    LPC_SC->EXTINT |= (1<<0); //clear EINT0

    LPC_GPIO0->FIODIR |= (1<<0); //p0.0 as o/p pin
    for(a=0;a<=10;a++)
    {
        LPC_GPIO0->FIOSET |= (1<<0); //LED on
        delay(200000);
        LPC_GPIO0->FIOCLR |= (1<<0); //LED off
        delay(200000);
    }
}

int main(void)
{
    LPC_PINCON->PINSEL4 |= (1<<20); //Configure p2.10 as EINT0
    LPC_SC->EXTINT |= (1<<0); // Clear Pending interrupts
    LPC_SC->EXTMODE |= (1<<0); //Configure EINT0 as Edge Triggered
    LPC_SC->EXTPOLAR |= (1<<0); //Configure EINTx as Rising Edge
    NVIC_EnableIRQ(EINT0_IRQn); //Enable the EINT0 interrupts

    while(1)
    {

        LPC_GPIO1->FIODIR |= (1<<0); //p1.0 as o/p pin
        LPC_GPIO1->FIOSET |= (1<<0); // LED on
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<0); //LED off
        delay(200000);
    }

    void delay(uint32_t i)
    {
        uint32_t x;
        for(x=0;x<=i;x++);
    }
}
```

## //C Programming to demonstrate EXTINT0 and EXTINT1 interrupts

```
#include<stdio.h>
#include <lpc17xx.h>
void delay(uint32_t);
void EINT0_IRQHandler(void)
{
    uint32_t a;
    LPC_SC->EXTINT |= (1<<0); //clear EXTINT0
    LPC_GPIO1->FIODIR |= (1<<31); //p1.31 as o/p pin
    for(a=0;a<=10;a++)
    {
        LPC_GPIO1->FIOSET |= (1<<31); //p1.31 is HIGH
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<31); //p1.31 is LOW
        delay(200000);
    }
}
void EINT1_IRQHandler(void)
{
    uint32_t b;
    LPC_SC->EXTINT |= (1<<1); //clear EXTINT1
    LPC_GPIO1->FIODIR |= (1<<0); //p1.0 as o/p pin
    for(b=0;b<=10;b++)
    {
        LPC_GPIO1->FIOSET |= (1<<0); //p1.0 is HIGH
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<0); //p1.0 is LOW
        delay(200000);
    }
}
int main(void)
{
    LPC_PINCON->PINSEL4 |= (1<<20) | (1<<22); //Configure P2.10,P2.11 as EINT0/1
    LPC_SC->EXTINT |= (1<<0)|(1<<1); // Clear Pending interrupts
    LPC_SC->EXTMODE |= (1<<0)|(1<<1); //Configure EINTx as Edge Triggered
    LPC_SC->EXTPOLAR |= (1<<0)|(1<<1); //Configure EINTx as Rising Edge
    NVIC_EnableIRQ(EINT0_IRQn); //Enable the EINT0,EINT1 interrupts
    NVIC_EnableIRQ(EINT1_IRQn);
    while(1)
    {
        LPC_GPIO1->FIODIR |= (1<<16); //p1.16 as o/p pin
        LPC_GPIO1->FIOSET |= (1<<16); //p1.16 is HIGH
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<16); //p1.16 is LOW
        delay(200000);
    }
}
void delay(uint32_t i)
{
    uint32_t x;
    for(x=0;x<=i;x++);
}
```

## //C Programming to demonstrate EXTINT0 and EXTINT1 interrupts based on priority

```
#include<stdio.h>
#include <lpc17xx.h>
void delay(uint32_t);
void EINT0_IRQHandler(void)
{
    uint32_t a;
    LPC_SC->EXTINT |= (1<<0); //clear EXTINT0
    LPC_GPIO1->FIODIR |= (1<<31); //p1.31 as o/p pin
    for(a=0;a<=10;a++)
    {
        LPC_GPIO1->FIOSET |= (1<<31); //p1.31 is HIGH
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<31); //p1.31 is LOW
        delay(200000);
    }
}
void EINT1_IRQHandler(void)
{
    uint32_t b;
    LPC_SC->EXTINT |= (1<<1); //clear EXTINT1
    LPC_GPIO1->FIODIR |= (1<<0); //p1.0 as o/p pin
    for(b=0;b<=10;b++)
    {
        LPC_GPIO1->FIOSET |= (1<<0); //p1.0 is HIGH
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<0); //p1.0 is LOW
        delay(200000);
    }
}
int main(void)
{
    LPC_PINCON->PINSEL4 |= (1<<20) | (1<<22); //Configure P2.10,P2.11 as EINT0/1
    LPC_SC->EXTINT |= (1<<0)|(1<<1); // Clear Pending interrupts
    LPC_SC->EXTMODE |= (1<<0)|(1<<1); //Configure EINTx as Edge Triggered
    LPC_SC->EXTPOLAR |= (1<<0)|(1<<1); //Configure EINTx as Rising Edge
    NVIC_EnableIRQ(EINT0_IRQn); //Enable the EINT0,EINT1 interrupts
    NVIC_EnableIRQ(EINT1_IRQn);
    NVIC_SetPriority(EINT0_IRQn, 0); //set interrupt0 to highest priority
    NVIC_SetPriority(EINT1_IRQn, 1); // set interrupt1 to lowest priority
    while(1)
    {
        LPC_GPIO1->FIODIR |= (1<<16); //p1.16 as o/p pin
        LPC_GPIO1->FIOSET |= (1<<16); //p1.16 is HIGH
        delay(200000);
        LPC_GPIO1->FIOCLR |= (1<<16); //p1.16 is LOW
        delay(200000);
    }
}
void delay(uint32_t i)
{
    uint32_t x;
    for(x=0;x<=i;x++);
}
```