**//C Programming of PORT0 as output to send 32-bit data using FIOPIN register**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x=0x12345678,y=0x111111111,z;

int main(void)

{

z = x + y;

LPC\_GPIO0->FIODIR= 0xffffffff; // Port 0 as output

while(1)

{

LPC\_GPIO0->FIOPIN = z; // send the value of z through port0 using FIOPIN register

}

}

**//C Programming of P0.0 as input and P1.7-P1.0 as output, monitor the status of the switch and send**

**different data based on the switch status using FIOPIN register**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x;

int main(void)

{

LPC\_GPIO0->FIODIR = 0xfffffffe; //or LPC\_GPIO0->FIODIR &=~(1<<0); p0.0 as input

LPC\_GPIO1->FIODIR = 0x000000ff; //or LPC\_GPIO1->FIODIR |=(0xff<<0); p1.7-p1.0 as output

while(1)

{

x=LPC\_GPIO0->FIOPIN; // read the status of the switch or if(!(LPC\_GPIO0->FIOPIN & (1<<0));

if(x==1)// check switch status

{

LPC\_GPIO1->FIOPIN=0x0f; // if switch is closed, send 0x0f

}

else

{

LPC\_GPIO1->FIOPIN=0xf0; // if switch is open, send 0xf0

}

}

}

**//C Programming of P0.0 as input and P1.7-P1.0 as output, monitor the status of the switch and send**

**different data based on the switch status using SWITCH statement**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x;

int main(void)

{

LPC\_GPIO0->FIODIR = 0xfffffffe; // P0.0 as input

LPC\_GPIO1->FIODIR = 0x000000ff; // P1.7-P1.0 as output

while(1)

{

x=LPC\_GPIO0->FIOPIN;

switch(x)

{

case (0):

LPC\_GPIO1->FIOPIN=0xf0;

break;

case (1):

LPC\_GPIO1->FIOPIN=0x0f;

break;

}

}

}

**//C Programming of P0.0 and P0.1 as input pins and P1.7-P1.0 as output, monitor the status of the switch and based on the switch status using SWITCH statement, Make high some pins**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t value;

int main (void)

{

LPC\_GPIO0->FIODIR = 0xffffffff; /\* LEDs on PORT0 are output \*/

LPC\_GPIO1->FIODIR &=~(3<<0) ; // p1.1-p1.0 as input

while(1)

{

value = ((LPC\_GPIO1->FIOPIN & (3<<0))>>0) ;// read the switch status

switch(value)

{

case (0):

LPC\_GPIO0->FIOSET =(1<<0);

break;

case (1):

LPC\_GPIO0->FIOSET =(1<<8);

break;

case (2):

LPC\_GPIO0->FIOSET =(1<<16);

break;

case (3):

LPC\_GPIO0->FIOSET =(1<<24);

break;

}

}

}

**//C Programming to blink LEDs on PORT0 using FIOSET and FIOCLR registers**

#include "lpc17xx.h"

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0xffffffff;//port0 as ouput

while(1)

{

LPC\_GPIO0->FIOSET = 0xffffffff;//port0 status HIGH

delay(100000);

LPC\_GPIO0->FIOCLR = 0xffffffff;//port0 status LOW

delay(100000);

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to blink LEDs on PORT0 using FIOPIN registers**

#include "lpc17xx.h"

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0xffffffff;//port0 as ouput

while(1)

{

LPC\_GPIO0->FIOPIN ^= 0xffffffff;//Toggle port0

delay(100000);

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to blink particular LEDs on PORT0 using FIOSET and FIOCLR registers**

#include <stdio.h>

#include "lpc17xx.h"

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0x01010101;//p0.24,p0.16,p0.8,p0.0 as output pins

while(1)

{

LPC\_GPIO0->FIOSET = 0x01010101;//LEDs on p0.24,p0.16,p0.8,p0.0 are ON

delay(100000);

LPC\_GPIO0->FIOCLR = 0x01010101;//LEDs on p0.24,p0.16,p0.8,p0.0 are OFF

delay(100000);

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to blink particular LEDs on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR |= (1<<24)|(1<<16)|(1<<8)|(1<<0);//p0.24,p0.16,p0.8,p0.0 as output pins

while(1)

{

LPC\_GPIO0->FIOPIN ^= (1<<24)|(1<<16)|(1<<8)|(1<<0);//LEDs on p0.24,p0.16,p0.8,p0.0 Toggles

delay(300000);

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to blink particular LEDs on PORT0 using FIOPIN registers based on status of the**

**switch**

**#include <stdio.h>**

**#include "lpc17xx.h"**

**uint32\_t x;**

**void delay(uint32\_t);**

**int main (void)**

**{**

**LPC\_GPIO0->FIODIR = 0x80000001;// or LPC\_GPIO0->FIODIR |= (1<<31)|(1<<0);**

**LPC\_GPIO1->FIODIR = 0xfffffffe; // or LPC\_GPIO1->FIODIR &= ~(1<<0);**

**while(1)**

**{**

**x=LPC\_GPIO1->FIOPIN; // read the switch status**

**if(x==0) // if switch is open, blink LED on P0.0**

**{**

**LPC\_GPIO0->FIOPIN ^=1<<0;**

**LPC\_GPIO0->FIOPIN |=1<<31;**

**delay(300000);**

**}**

**Else // if switch is closed, blink LED on P0.31**

**{**

**LPC\_GPIO0->FIOPIN ^=1<<31;**

**LPC\_GPIO0->FIOPIN |=1<<0;**

**delay(300000);**

**}**

**}**

**}**

**void delay(uint32\_t i)**

**{**

**uint32\_t x;**

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

**}**

**//C Programming to alternate LEDs blinking on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0xffffffff;// PORT0 as output

while(1)

{

LPC\_GPIO0->FIOPIN = 0x55555555; //0101 0101 0101 0101 0101 0101 0101 0101

delay(300000);

LPC\_GPIO0->FIOPIN = 0xaaaaaaaa; //1010 1010 1010 1010 1010 1010 1010 0101

delay(300000);

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate LEDs walking on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y,a,b;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR |= 0xffffffff;// LEDs on PORT0 are output

while(1)

{

for(a=0x80000000;a>0x00000001;a>>=1)

{

LPC\_GPIO0->FIOPIN= a;

delay(300000);

}

for(b=0x00000001;b<0x80000000;b<<=1)

{

LPC\_GPIO0->FIOPIN= b;

delay(300000);

}

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate up-counting (0x00 to 0xff) on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y,a,b;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0x000000ff; // LEDs on PORT0 are output

while(1)

{

for(a=0x00000000;a<=0x000000ff;a++)

{

LPC\_GPIO0->FIOPIN=a;

delay(300000);

}

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate down-counting (0xff to 0x00) on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y,a,b;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0x000000ff; // LEDs on PORT0 are output

while(1)

{

for(a=0x000000ff;a>=0x00000000;a--)

{

LPC\_GPIO0->FIOPIN=a;

delay(300000);

}

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate up/down-counting (0x00 to 0xff to 0x00) on PORT0 using FIOPIN**

**registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y,a,b;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0x000000ff; //LEDs on PORT0 are output

while(1)

{

for(a=0x00000000;a<=0x000000ff;a++)

{

LPC\_GPIO0->FIOPIN=a;

delay(300000);

}

for(b=0x000000ff;a>=0x00000000;a--)

{

LPC\_GPIO0->FIOPIN=b;

delay(300000);

}

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate BCD up-counting (00 to 99) on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y,a,b;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0x000000ff;// LEDs on PORT0 are output

for(a=0;a<100;a++)

{

b=(((a/10)<<4)|(a%10)); // convert hexadecimal into decimal

LPC\_GPIO0->FIOPIN=b;

delay(300000);

}

while(1);

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate RING operation on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y,a,b;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0xffffffff; // LEDs on PORT0 are output x=0x80000000;

while(1)

{

for(a=0x80000000;a>=0x00000001;a>>=1)

{

LPC\_GPIO0->FIOPIN= a;

delay(300000);

}

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**//C Programming to demonstrate TWISTED RING operation on PORT0 using FIOPIN registers**

#include <stdio.h>

#include "lpc17xx.h"

uint32\_t x,y;

void delay(uint32\_t);

int main (void)

{

LPC\_GPIO0->FIODIR = 0xffffffff; / LEDs on PORT0 are output

x=0x80000000;

while(1)

{

LPC\_GPIO0->FIOPIN= x;

delay(300000);

x=x>>1;

x=x|0x80000000;

LPC\_GPIO0->FIOPIN= x;

while(x==0xffffffff)

{

LPC\_GPIO0->FIOPIN= x;

delay(300000);

for(y=0;y<=32;y++)

{

x=x>>1;

LPC\_GPIO0->FIOPIN= x;

delay(300000);

}

}

}

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}