**// C Programming of UART1 to display message in one line**

#include<stdio.h>

#include <lpc17xx.h>

void uart\_init(void);

void delay(uint32\_t);

int main (void)

{

uint32\_t i;

unsigned char c[]="I am learning LPC1768 ARM Cortex M3 microcontroller programming\n\r\0";

uart\_init();

for(i=0;c[i]!=0;i++)

{

LPC\_UART1->THR =c[i];

while (!(LPC\_UART1->LSR & 0x20));

delay(100000);

}

while(1);

}

void uart\_init()

{

LPC\_SC->PCONP |= (1 << 4);//enable power to UART1

LPC\_PINCON->PINSEL4 |=(2 << 0)|(2<<2);//Pin P2.0 used as TXD1 and Pin P2.1 used as RXD1

LPC\_UART1->FCR= 0x07;//enable different FIFO

LPC\_UART1->LCR = 0x83;// 8 bits, no Parity, 1 Stop bit

LPC\_UART1->DLL = 0x12;//115200 Baud Rate @ 25.0 MHZ PCLK

LPC\_UART1->FDR = 0x21;//FR 1,507, DIVADDVAL=1, MULVAL=2

LPC\_UART1->DLM = 0x0;//High divisor latch = 0

LPC\_UART1->LCR = 0x03;// DLAB = 0

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**// C Programming of UART1 to display message in different line**

#include<stdio.h>

#include <lpc17xx.h>

void uart\_init(void);

void delay(uint32\_t);

int main (void)

{

uint32\_t i;

unsigned char c[]="I am Dr. S. PARAMESHWARA\nAssitant Professor\nDept. of E&C\nThe National Institute of Engineering\nMysuru-570008\nKarnataka, India\nI am learning LPC1768 ARM Cortex M3 microcontroller programming\0";

uart\_init();

for(i=0;c[i]!=0;i++)

{

LPC\_UART1->THR =c[i];

while (!(LPC\_UART1->LSR & 0x20));

delay(100000);

}

while(1);

}

void uart\_init()

{

LPC\_SC->PCONP |= (1 << 4);//enable power to UART1

LPC\_PINCON->PINSEL4 |=(2 << 0)|(2<<2);//Pin P2.0 used as TXD1 and Pin P2.1 used as RXD1

LPC\_UART1->FCR= 0x07;//enable different FIFO

LPC\_UART1->LCR = 0x83;// 8 bits, no Parity, 1 Stop bit

LPC\_UART1->DLL = 0x12;//115200 Baud Rate @ 25.0 MHZ PCLK

LPC\_UART1->FDR = 0x21;//FR 1,507, DIVADDVAL=1, MULVAL=2

LPC\_UART1->DLM = 0x0;//High divisor latch = 0

LPC\_UART1->LCR = 0x03;// DLAB = 0

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**// C Programming of UART1 to display 0 to 9 in different line**

#include<stdio.h>

#include <lpc17xx.h>

void uart\_init(void);

void delay(uint32\_t);

int main (void)

{

uint32\_t i,a,b;

uart\_init();

for(i=0;i<=9;i++)

{

a=i+0x30;

LPC\_UART1->THR =a;

while (!(LPC\_UART1->LSR & 0x20));

delay(200000);

LPC\_UART1->THR ='\n';

while (!(LPC\_UART1->LSR & 0x20));

}

while(1);

}

void uart\_init()

{

LPC\_SC->PCONP |= (1 << 4);//enable power to UART1

LPC\_PINCON->PINSEL4 |=(2 << 0)|(2<<2);//Pin P2.0 used as TXD1 and Pin P2.1 used as RXD1

LPC\_UART1->FCR= 0x07;//enable different FIFO

LPC\_UART1->LCR = 0x83;// 8 bits, no Parity, 1 Stop bit

LPC\_UART1->DLL = 0x12;//115200 Baud Rate @ 25.0 MHZ PCLK

LPC\_UART1->FDR = 0x21;//FR 1,507, DIVADDVAL=1, MULVAL=2

LPC\_UART1->DLM = 0x0;//High divisor latch = 0

LPC\_UART1->LCR = 0x03;// DLAB = 0

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}

**// C Programming of UART1 to display 00 to 99 in different line**

#include<stdio.h>

#include <lpc17xx.h>

void uart\_init(void);

void delay(uint32\_t);

int main (void)

{

uint32\_t i,a,b;

uart\_init();

while(1)

{

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

{

a=i/10;

a=a|0x30;

LPC\_UART1->THR =a;

while (!(LPC\_UART1->LSR & 0x20));

b=i%10;

b=b|0x30;

LPC\_UART1->THR =b;

while (!(LPC\_UART1->LSR & 0x20));

delay(300000);

LPC\_UART1->THR ='\n';

while (!(LPC\_UART1->LSR & 0x20));

}

}

}

void uart\_init()

{

LPC\_SC->PCONP |= (1 << 4);//enable power to UART1

LPC\_PINCON->PINSEL4 |=(2 << 0)|(2<<2);//Pin P2.0 used as TXD1 and Pin P2.1 used as RXD1

LPC\_UART1->FCR= 0x07;//enable different FIFO

LPC\_UART1->LCR = 0x83;// 8 bits, no Parity, 1 Stop bit

LPC\_UART1->DLL = 0x12;//115200 Baud Rate @ 25.0 MHZ PCLK

LPC\_UART1->FDR = 0x21;//FR 1,507, DIVADDVAL=1, MULVAL=2

LPC\_UART1->DLM = 0x0;//High divisor latch = 0

LPC\_UART1->LCR = 0x03;// DLAB = 0

}

void delay(uint32\_t i)

{

uint32\_t x;

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

}