// 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++);
 }
```