

```
1  //=====Transmitting Data 'Y' using UART0=====//
2  #include <MKL25Z4.H>
3
4  void UART0_init(void);           //function declaration
5
6  int main (void){
7      UART0_init();               //Initiating UART0 as transmitter
8      char *msg = "HELLO WORLD "; //msg
9      int i=0;                    //to send data on time
10     while (1){                  //Infinite Loop
11         //int i=0;               //to continuous send data
12         while(msg[i]){
13             while(!(UART0->S1 & 0x80)); //In a loop till transmitting data buffer is not empty
14             UART0->D = msg[i];       //Transmitting msg[i] via UART0
15             i++;
16         }
17     }
18 }
19 void UART0_init(void){           //function definition
20     SIM->SCGC4 |= (1<<10);        // set 10th index(index start from 0) bit = 1, enable clock for
    UART0 by 1<<10 or 0x400
21     SIM->SOPT2 |= (1<<26);        // set 26th index bit = 1, Selecting MCGFLLCLK clock or
    MCGPLLCLK/2 as clock source 1<<26 or 0x04000000
22     SIM->SOPT2 &= 0xF7FFFFFF;     // set 27th index bit = 0, other undisturbed, F(0111)FFFFFF
23     UART0->C2 = 0x00;             // Transmitter, Receiver disabled
24     UART0->BDH = 0x00;            // Baudrate updated
25     UART0->BDL = 0x18;            //00001101, to write 24, SBR = (clock freq/(OSR*))
26     UART0->C4 = 0x0F;             //00001111, for OCR of 16, Setting OverSampling Ratio 0111
27     UART0->C1 = 0x00;            //00000000, no parity
28     UART0->C2 = 0x08;            //set 3rd index bit = 1, 00001000, Transmitter enabled &
    Receiver disabled
29     SIM->SCGC5 |= (1<<9);         //set 9th index bit = 0, Clock for PORT A Enabled
30     PORTA->PCR[2] = (1<<9);       //set 9th index bit = 0, MUXing PORT A to use as UART
31     PORTA->PCR[2] = 0xFFFFFAFF;   //reset
32 }
33
```