Interfacing serial port with PC both side communication.

#include <p18f4520.h>

#pragma config OSC=HS // High-speed Oscillator

#pragma config PWRT=OFF // Power-up Timer Disabled

#pragma config WDT=OFF // Watchdog Timer Disabled

#pragma config DEBUG=OFF, LVP=OFF // Debug and Low Voltage Programming Disabled

void UART\_Init(void); // Function to initialize UART

void UART\_TransmitChar(char); // Function to transmit a character

void UART\_SendString(const char\*); // Function to send a string

unsigned char text[] = "HELLO";

void main(void)

{

UART\_Init(); // Initialize UART

{

unsigned int i;

UART\_SendString(text); // Send "HELLO" string

for(i = 0; i < 10000; i++); // Simple delay

while(1);

}

}

void UART\_Init(void)

{

ADCON1 = 0x0F; // Configure all pins as digital

TRISCbits.RC6 = 0; // TX Pin set as output

TRISCbits.RC7 = 1; // RX Pin set as input

// UART Configuration

TXSTAbits.SYNC = 0; // Asynchronous mode

TXSTAbits.TX9 = 0; // 8-bit transmission

TXSTAbits.TXEN = 1; // Enable transmission

RCSTAbits.SPEN = 1; // Enable Serial Port

RCSTAbits.RX9 = 0; // 8-bit reception

SPBRG = 15; // Set baud rate to 9600 (with Fosc = 4MHz)

}

void UART\_TransmitChar(char ch)

{

while(!PIR1bits.TXIF); // Wait until TXIF is set (ready to transmit)

TXREG = ch; // Load the character into TXREG

}

void UART\_SendString(const char\* str)

{

while(\*str != '\0') // Loop until null terminator is found

{

UART\_TransmitChar(\*str); // Send each character

str++; // Move to the next character

}

}

