Topic 5 : UART Serial Port



Problem 1 : An embedded systems using ATMEGA32 (working at 7.372800Mhz) communicate with Hyperterminal by UART0 serial interface. The system has 4 LEDs connected to PORTD (PD4.PD5,PD5,PD7). When a system receiving new character from the UART serial port the system will display this character to PORTC, and toggle the relevant LED( for example the character received is ‘0’ LED0 will be toggled, the character received is ‘1’ LED1 will be toggled and so on … the character received is ‘3’ LED3 will be toggled ). The system using Interupt method and UART setting with baud rate 19200, 8 bit, 1 stop bit, no parity. Write C program to control the system.

Problem **2** : An embedded systems using ATMEGA32 (working at 11.0592Mhz) communicate with Hyperterminal by UART0 serial interface. The system has 4 LEDs connected to PORTB (PB0.PB1,PB2,PB3). When a system receiving new character from the UART serial port the system will display this character to PORTD, and toggle the relevant LED ( for example the character received is ‘0’ LED0 will be toggled, the character received is ‘1’ LED1 will be toggled and so on … the character received is ‘3’ LED3 will be toggled ). The system using Interupt method and UART setting with baud rate 38400, 8 bit, 1 stop bit, no parity. Write C program to control the system.