PRACTICAL REPORT

For IoT Practical

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4.13 – Serial Communication -

Send data to a serial device such as a serial LCD, but you are already using the built-in serial port to communicate with your computer.On a standard Arduino board (such as the Uno or Duemilanove) that only has one hardware serial port, you will need to create an mulated or “soft” serial port.

You can use the distributed SoftwareSerial library for sending data to multiple devices. Select two available digital pins, one each for transmit and receive, and connect your serial device to them. It is convenient to use the hardware serial port for communication with the computer because this has a USB adapter on the board. Connect the device’s transmit line to the receive pin and the receive line to the transmit pin.

Arduino Code:

```
#include <SoftwareSerial.h>

const int rxpin = 2; // pin used to receive (not used in this version)
const int txpin = 3; // pin used to send to LCD

SoftwareSerial serial_lcd(rxpin, txpin); // new serial port on pins 2 and 3

void setup()
{
        Serial.begin(9600); // 9600 baud for the built-in serial port
        serial_lcd.begin(9600); //initialize the software serial port also for 9600
}

int number = 0;

void loop()
{
        serial_lcd.print("The number is "); // send text to the LCD
        serial_lcd.println(number); // print the number on the LCD
        Serial.print("The number is ");
        Serial.println(number); // print the number on the PC console
```

```
    delay(500); // delay half second between numbers
    number++; // to the next number
}
```

OUTPUT: