TCP/IP DEMO GUI setup for PICEMnet 2

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Tested in following environment :
MPLAB X v5.45
XC8 v2.32
ICD4 debugger
PICDEM net2 demoboard (DM163024)

<u>Step1 (Hardware configuration)</u>

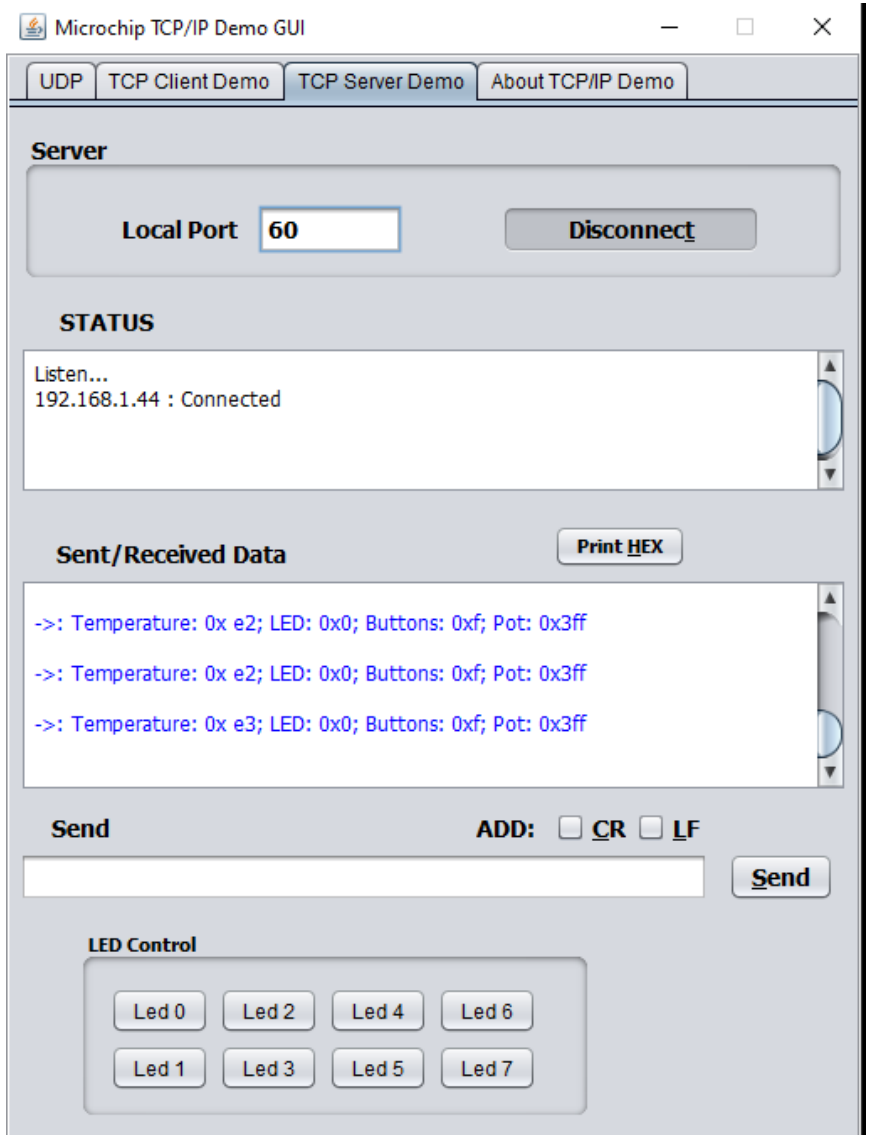
- Connect the 9V power supply
- Connect the ICD4 programming tool to the PC (USB) and to the PICDEM net 2 RJ11 connector
- Connect an ethernet cable between your router and the RJ45 connector coming from PIC18F97J60 (the closest from the LCD display)
- Connect your Host PC to the router (WiFi or ethernet) and make sure they are in the same DHCP domain (see later step to check this)
- Optional : USB – UART cable (for TCP/IP console messages

(e.g. MCP2200EV-VCP + USB mini to USB type A cable).
Use TERA TERM (https://ttssh2.osdn.jp) or any other open source terminal software as serial console.
Serial Setup : 115200,N,8,1

Step2
Open the project : **tcpClientDEMO.X** in the **TCPIP demo** directory
Select the **PICDEMnet2_ETH97J60 configuration**

Step 3
Open the file **main.c**
Search for **HOST**
Enter your **HOST PC** IP address
Check / change the default port number **60**
Compile and program the PICDEM net2 demoboard
After, programming the PIC18F97J60, the LCD display should show the demoboard IP address

Step3
Launch the Microchip TCP/IP demo GUI **TCPIP_Demo_AN1921.jar**
Select the TCP Server Demo tab
Keep default / change **Port** with the same Port number as the one entered in your main file.
In STATUS field from the TCP/IP Demo GUI you should see :
Listen…
xxx.xxx.xxx.xxx : Connected
(NB : xxx.xxx.xxx.xxx is your board IP address shown on the LCD display)
USE_ENc97J60



Step5

In **Sent/Received Data** field from the TCP/IP Demo GUI you should see :

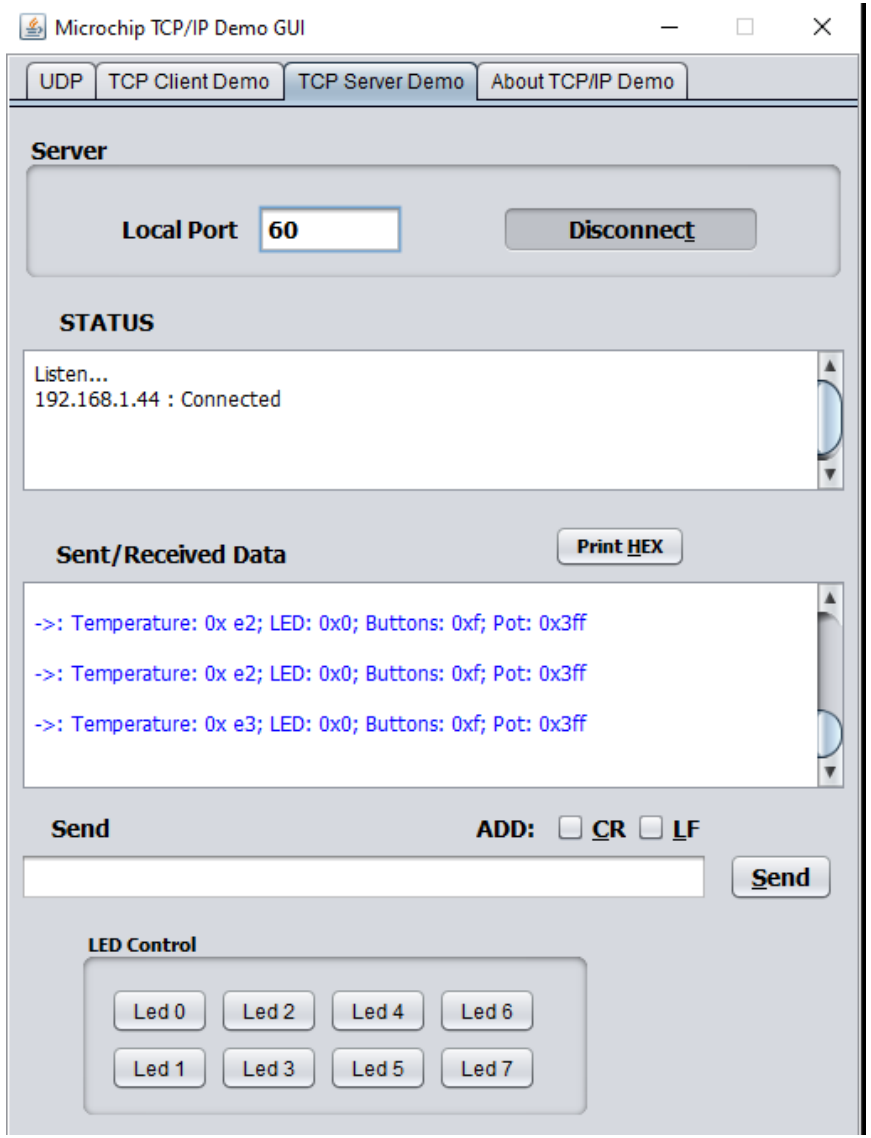
->: Temperature: 0x yy; LED: 0xyy; Buttons: 0xf; Pot:0xyyy

(values yy depend upon your local temperature, LEDs, button status and potentiometer position)

If you change these parameters, the values will change in real-time in the **Sent/Received Data** field from the TCP/IP Demo GUI .

Step6 : Control the Leds

By pushing any of the 8 buttons in the **LED Control** field from the TCP/IP Demo GUI you will light on the corresponding LED on the demoboard



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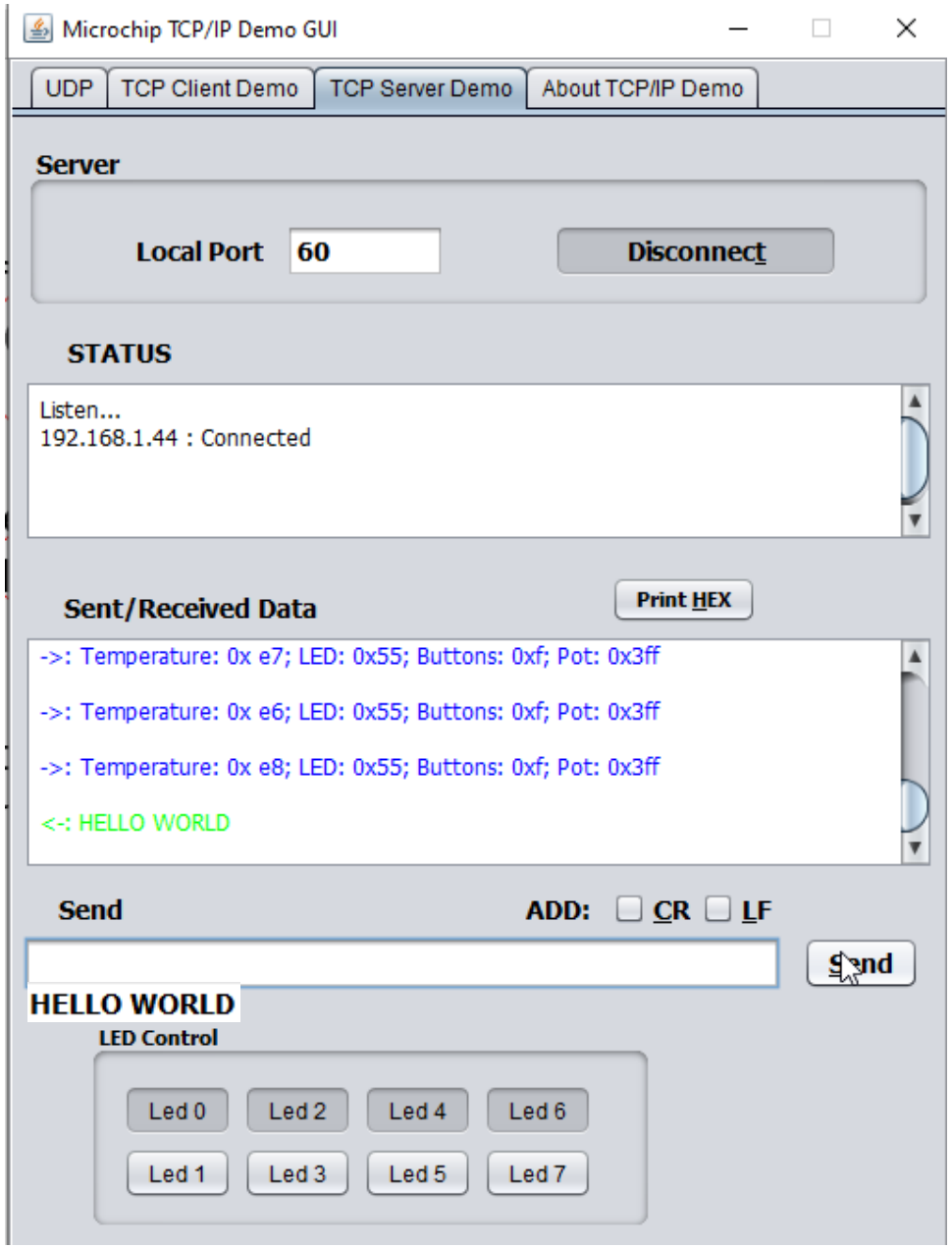
If you change these parameters, the values will change in real-time in the **Sent/Received Data** field from the TCP/IP Demo GUI .

Step6 : Control the Leds
By pushing any of the 8 buttons in the **LED Control** field from the TCP/IP Demo GUI you will lit on the corresponding LED on the demoboard

Step7 : Send a message to the LCD display
Type any message in the **Send** field from the TCP/IP Demo GUI .
Press the **Send** button
The message will appear on the 2nd line of the LCD display



OPTIONAL :

NB : the message logs are displayed at power on only.

After programming the application, power on the demoboard and after a few seconds some messages should be visible

In case you installed a USB-UART cable, you'll be able to see TCP/IP console messages like below if the link is successful :

(The IPv4 address shown is the demoboard IP address (it should be also visible on the PICDEMnet 2 LCD display)