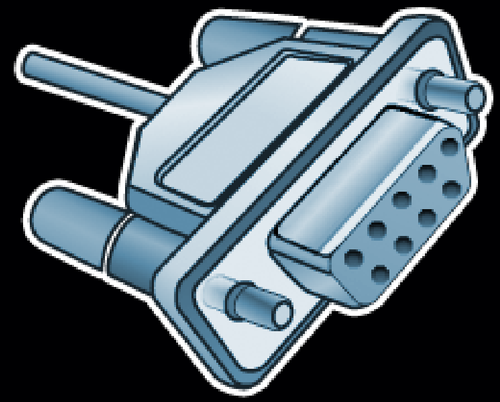
INC 272

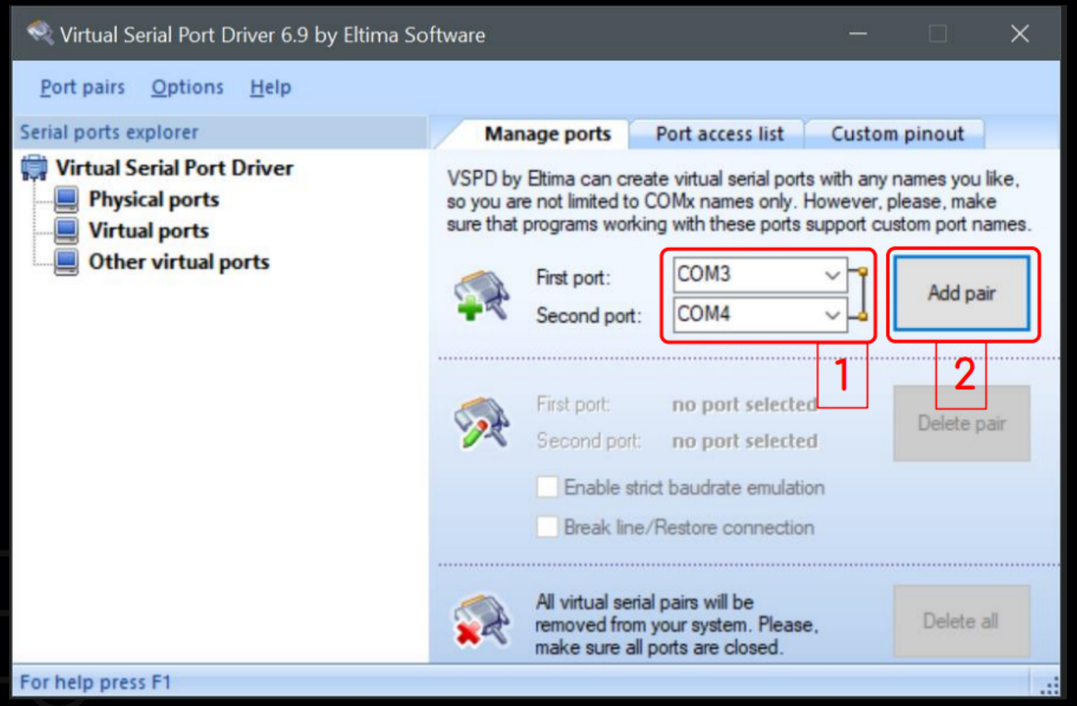
SOFTWARE TESTING

SETUP THE VIRTUAL SERIAL PORT DRIVER (VSPD)



SETUP THE VSPD

Run the VSPD (Run as administrator) and select COM3 and COM4 as the First port and Second port. Then click Add pair button.



NOTE: WE WILL USE THE
- COM3 FOR PROTEUS
- COM4 FOR NODE-RED

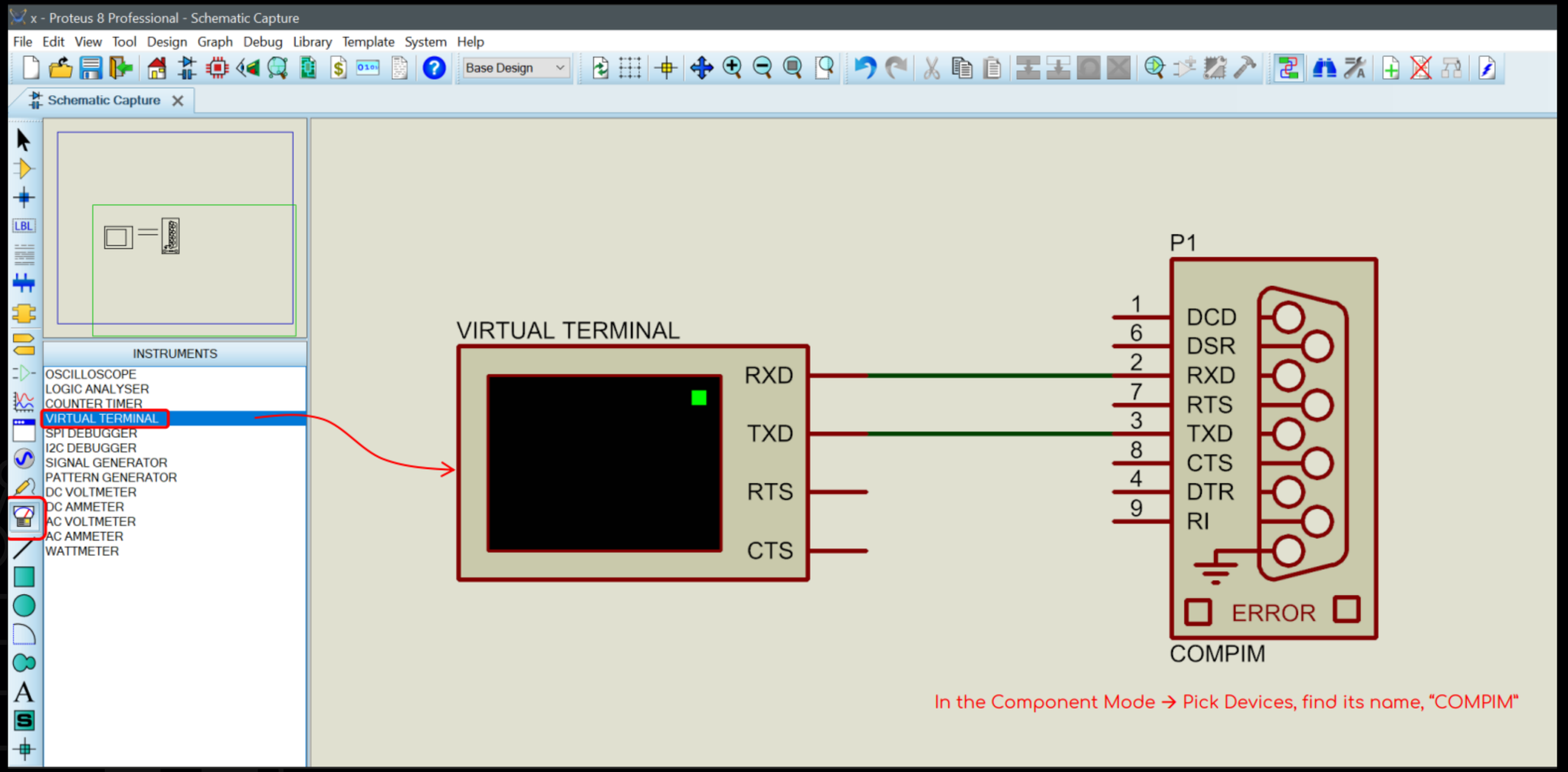
HE COM3 AND COM4 ARE CONNECTED. IT MEANS THAT THE PROTEUS AND THE NODE-RED ARE ALSO CONNECTED. THEY CAN EXCHANGE THEIR DATA OVER THE VIRTUAL SERIAL PORT USING UART PROTOCOL.

Note: if your use COM3 and COM4 , can be changed to other ports, e.g.; COM8 and COM9.

PROTEUS SERIAL PORT SIMULATION CIRCUIT

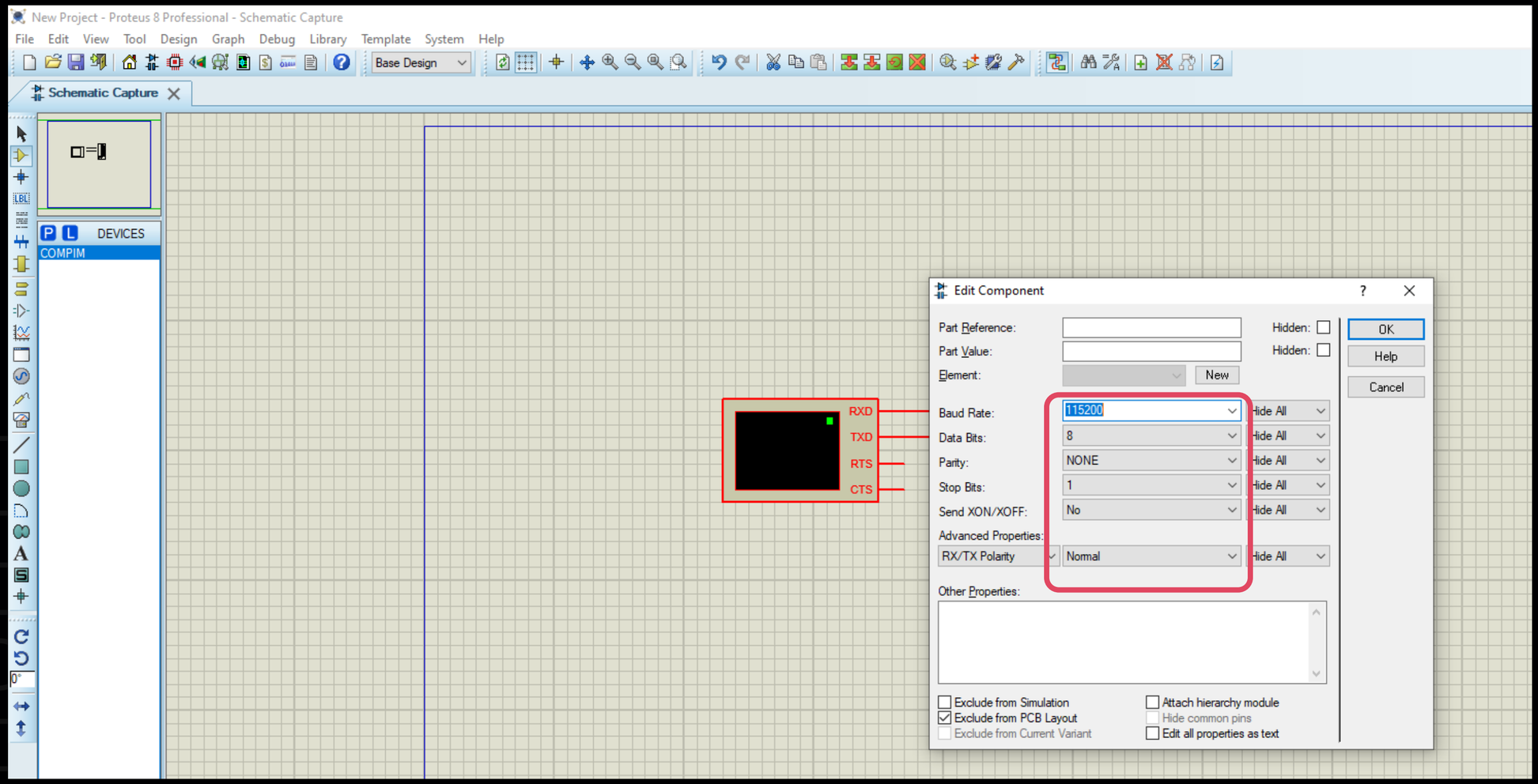
PROTEUS SERIAL PORT SIMULATION CIRCUIT

Run the Proteus (Run as administrator) and complete the simulation circuit



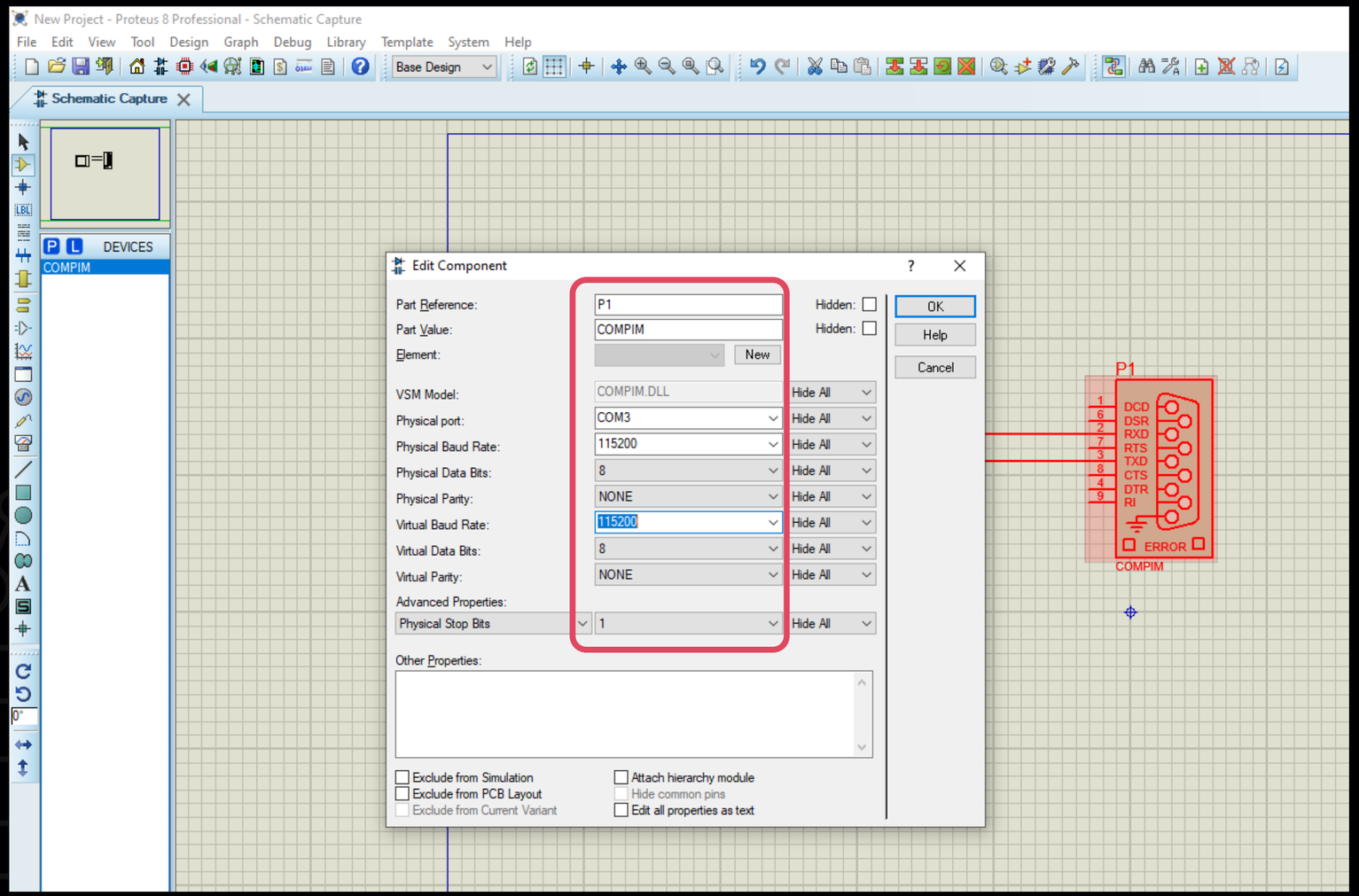
PROTEUS SERIAL PORT SIMULATION CIRCUIT

Double-click on the VIRTUAL TERMINAL and set all parameters as shown in the Edit Component window, then click the OK button.

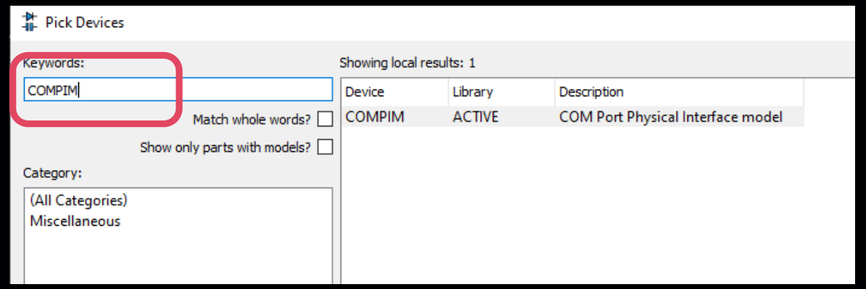


PROTEUS SERIAL PORT SIMULATION CIRCUIT

Double-click on the COMPIM and set all parameters as shown in the Edit Component window, then click the OK button.

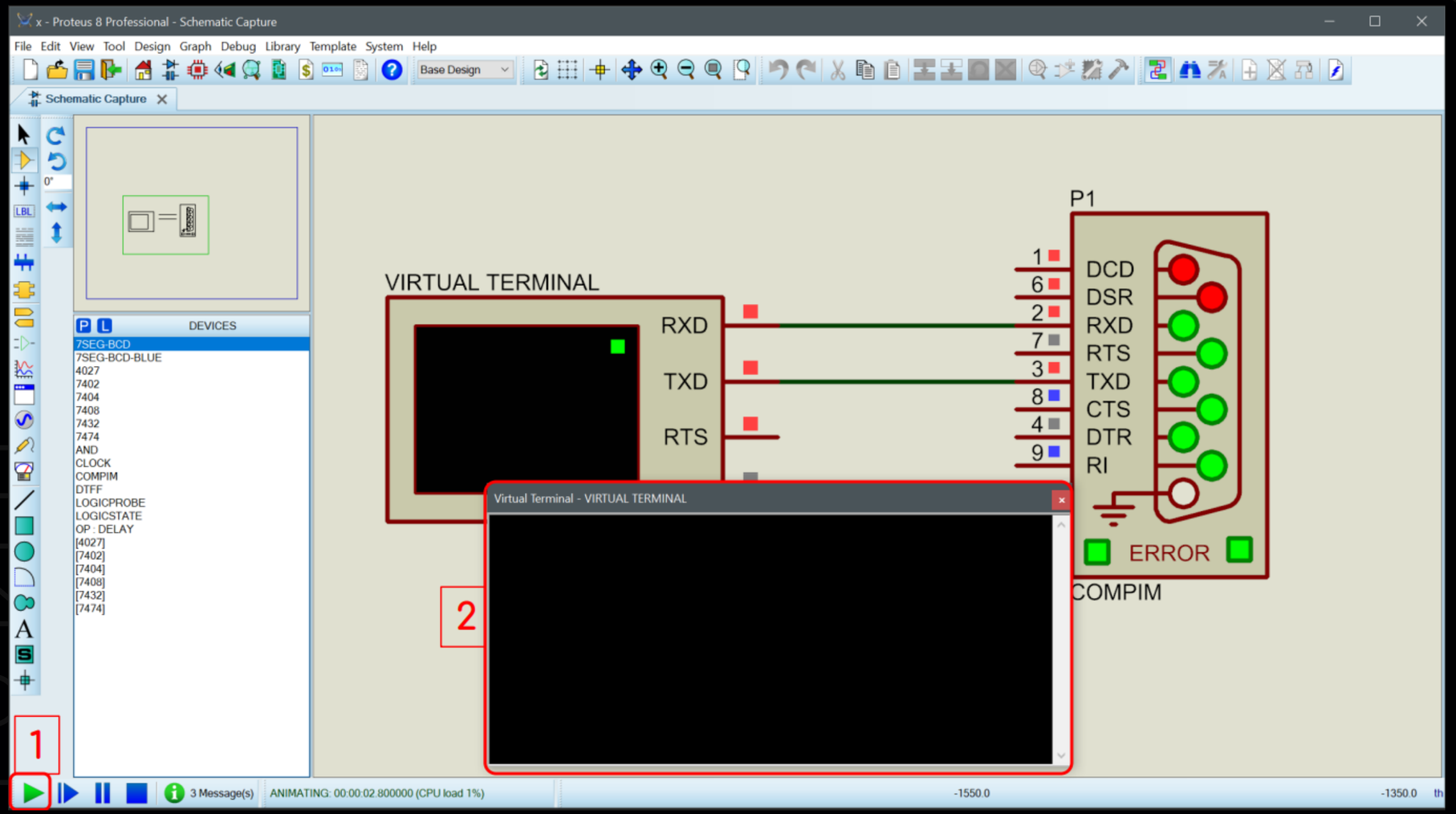


Search Component: Press P and key "COMPIM" in Keywords.



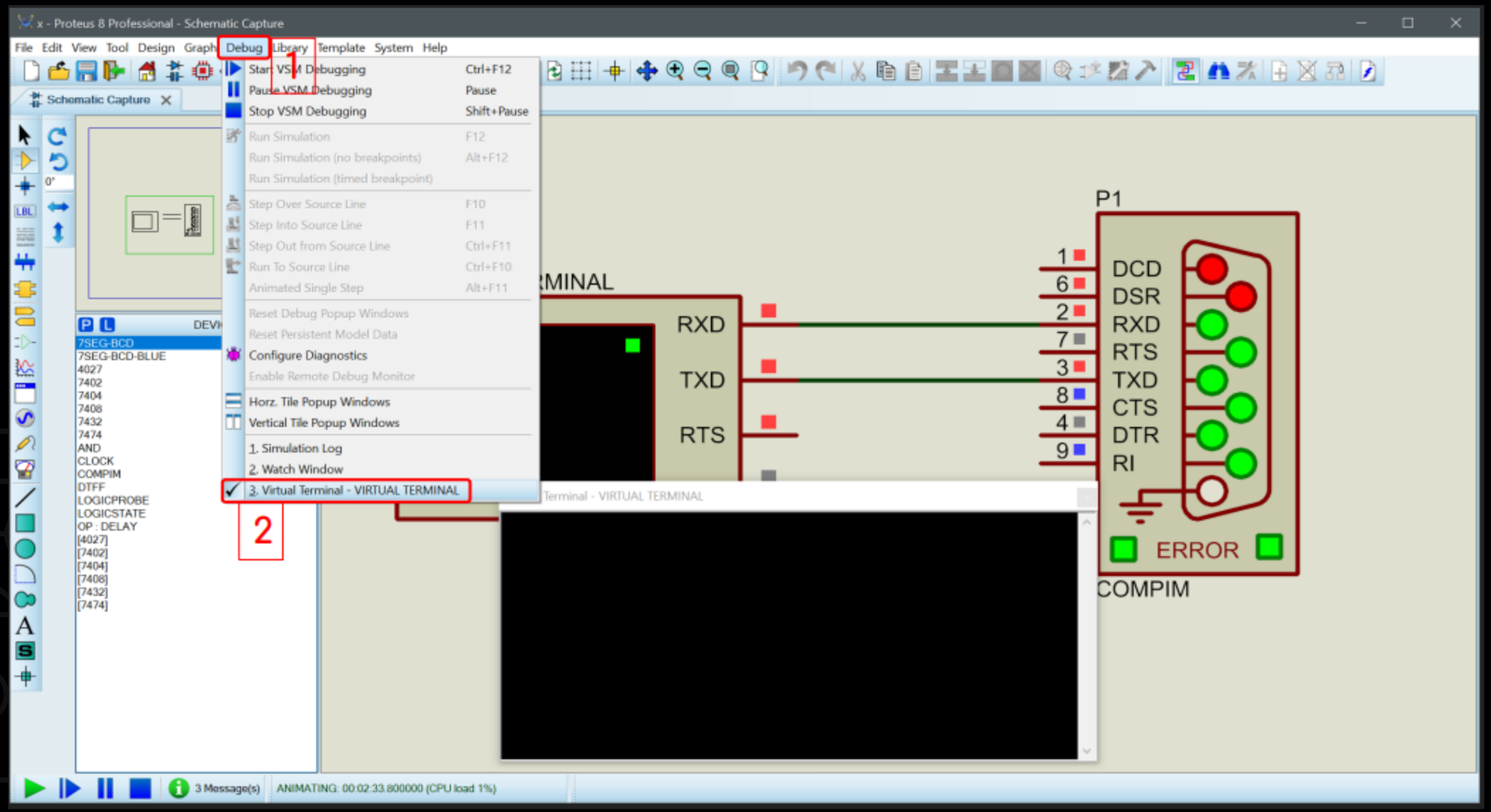
PROTEUS SERIAL PORT SIMULATION CIRCUIT

Click the Run button, the Virtual Terminal (black window) will show on the screen



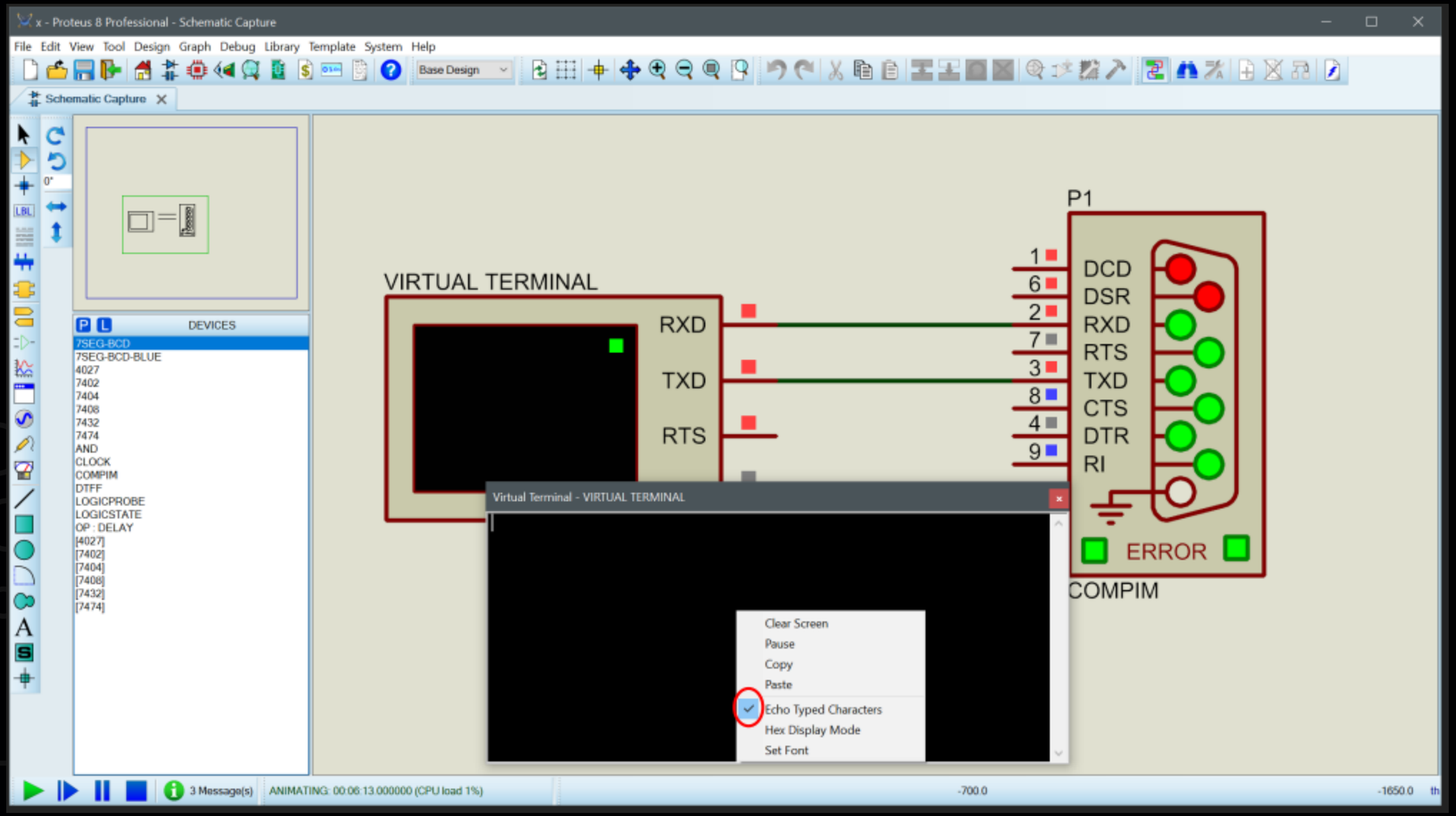
PROTEUS SERIAL PORT SIMULATION CIRCUIT

If the Virtual Terminal is not shown (it may be closed previously), click the Debug menu and click Virtual Terminal.



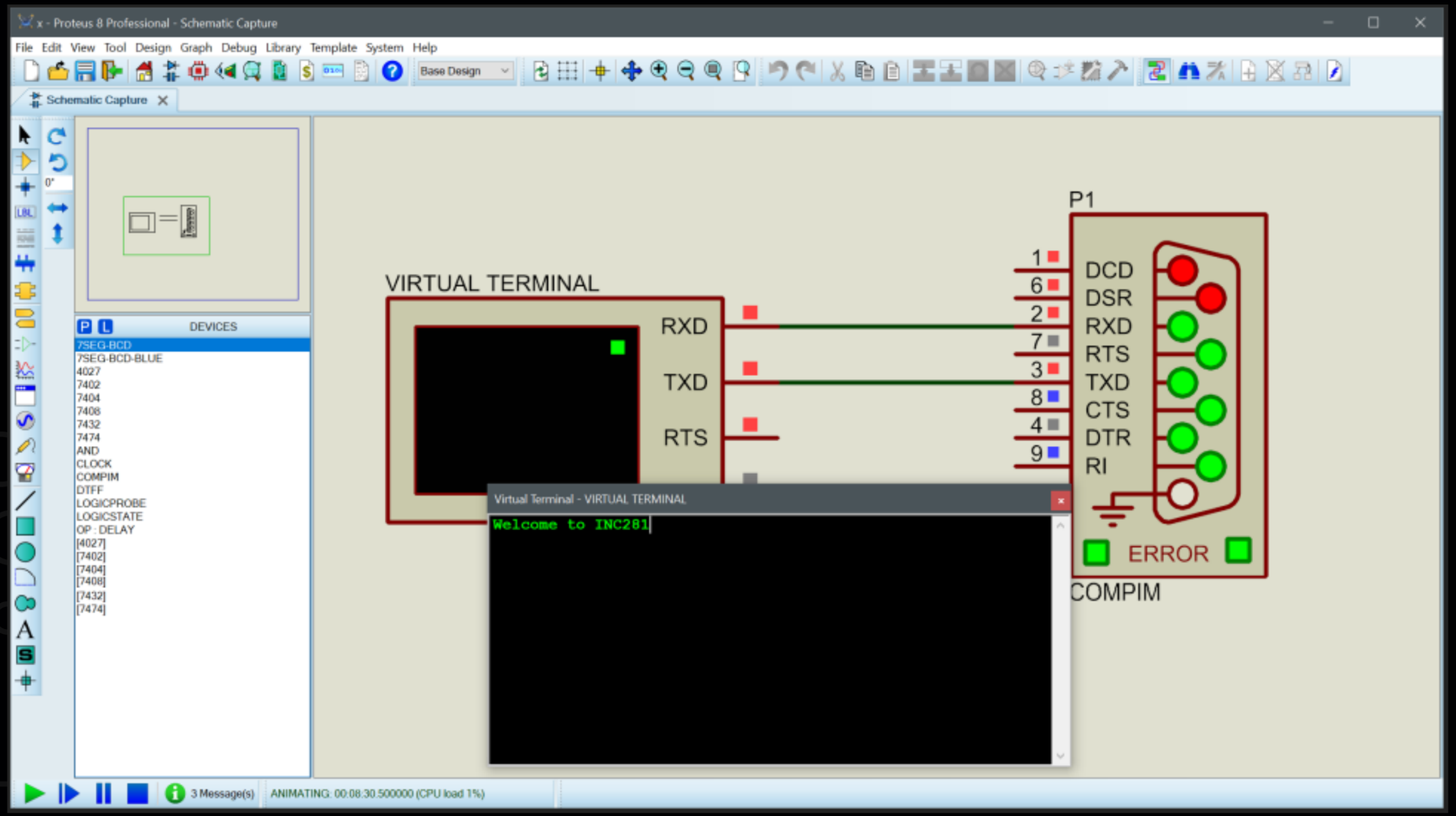
PROTEUS SERIAL PORT SIMULATION CIRCUIT

Right-click on the Virtual Terminal window (black area) and enable the Echo Typed Characters

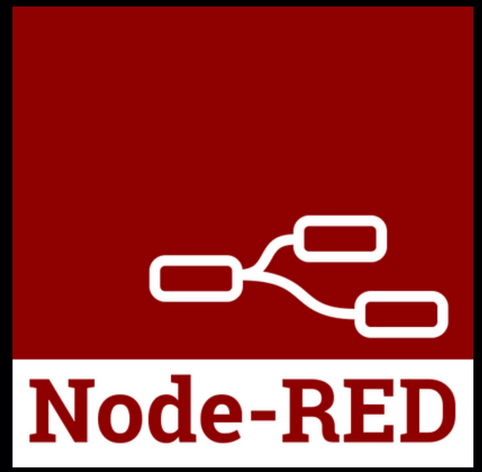


PROTEUS SERIAL PORT SIMULATION CIRCUIT

Now you can input some characters to the Virtual Terminal, and you can see what key you pressed. All characters from your keyboard will be sent to the serial port through the COMPIM.

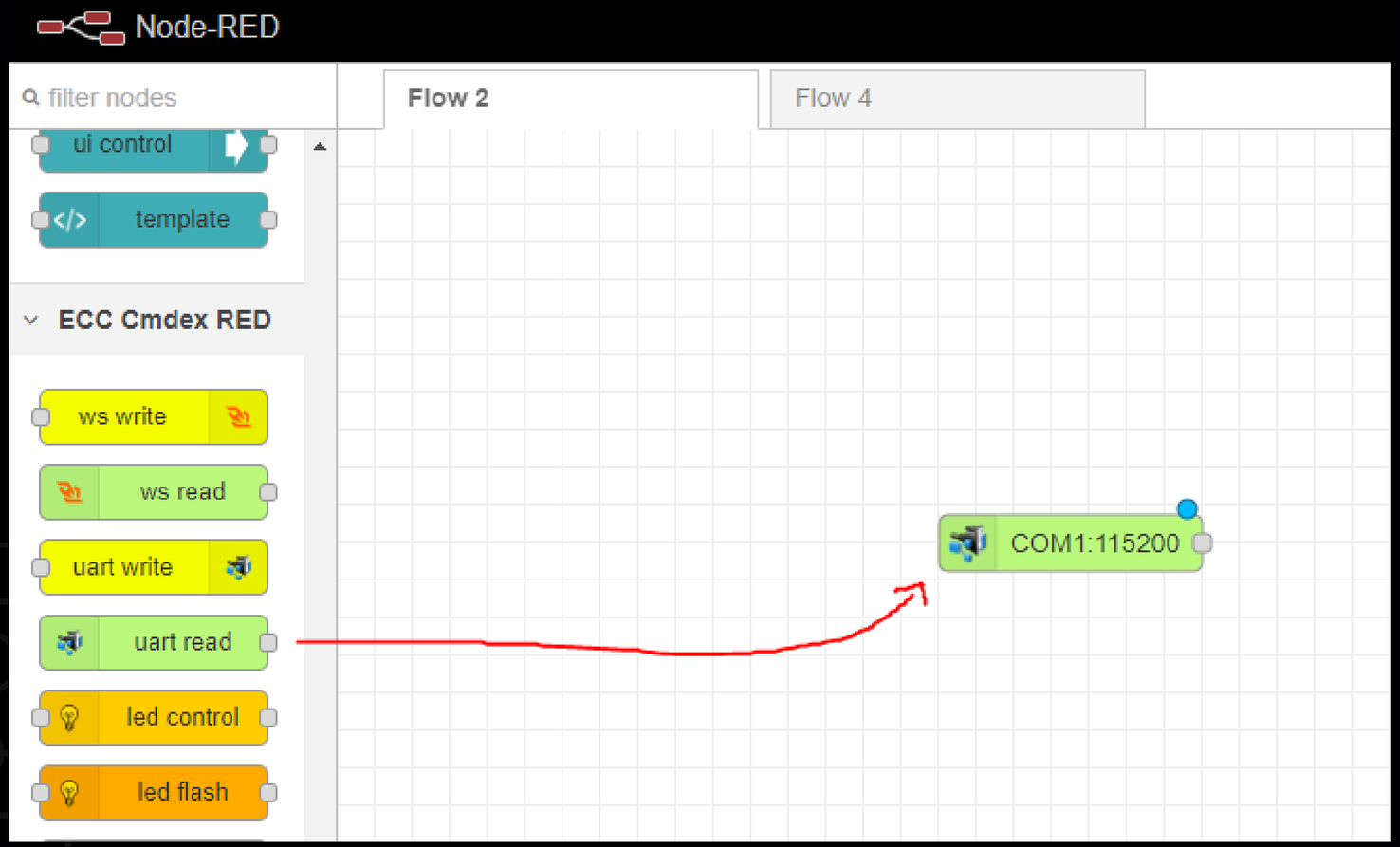


NODE-RED SERIAL PORT DATA RECEIVING



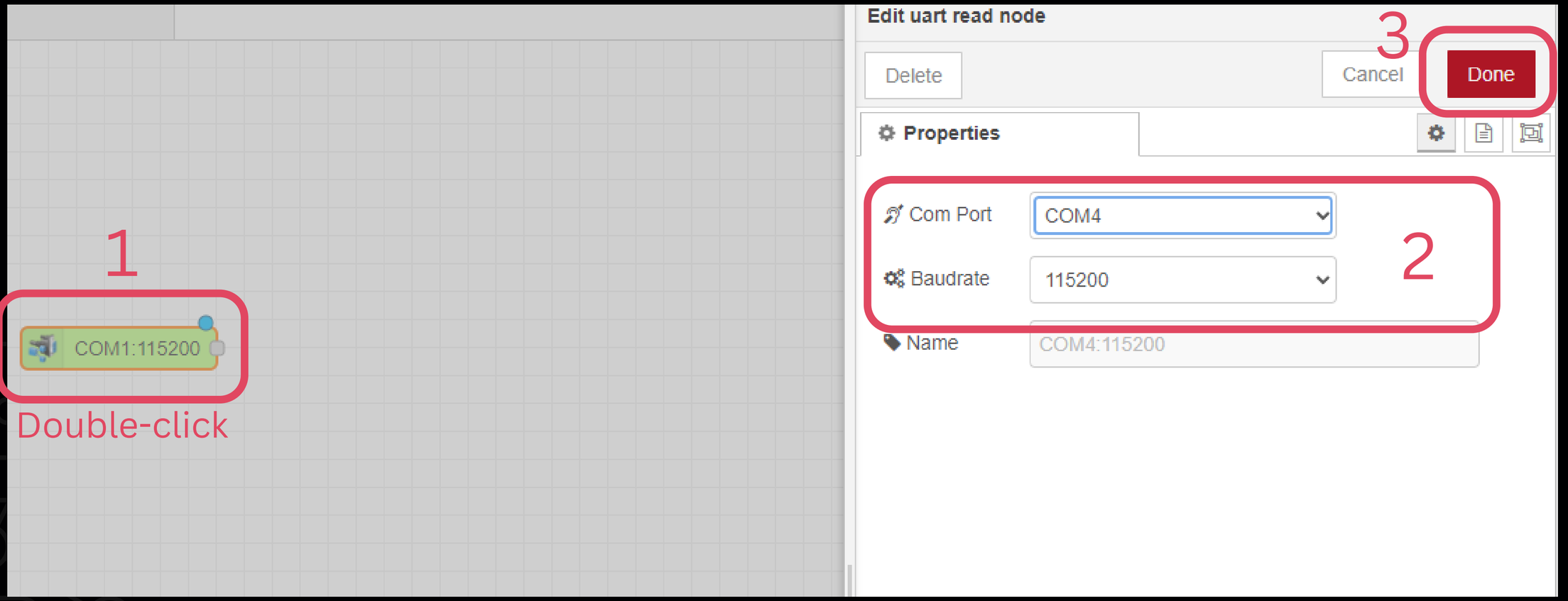
NODE-RED SERIAL PORT DATA RECEIVING

Drag and drop the uart red in node into working space



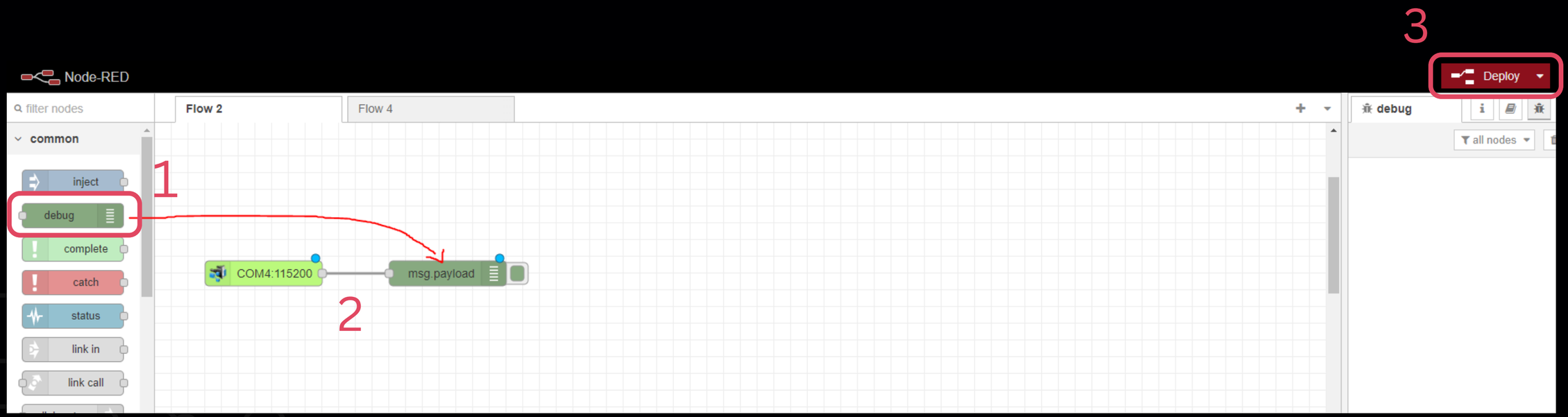
NODE-RED SERIAL PORT DATA RECEIVING

Double-click on the uart red node ,Set the properties as shown in the Properties window. Be sure, the Serial Port is COM4 and Baud Rate is 115200. Then, click the Done button.



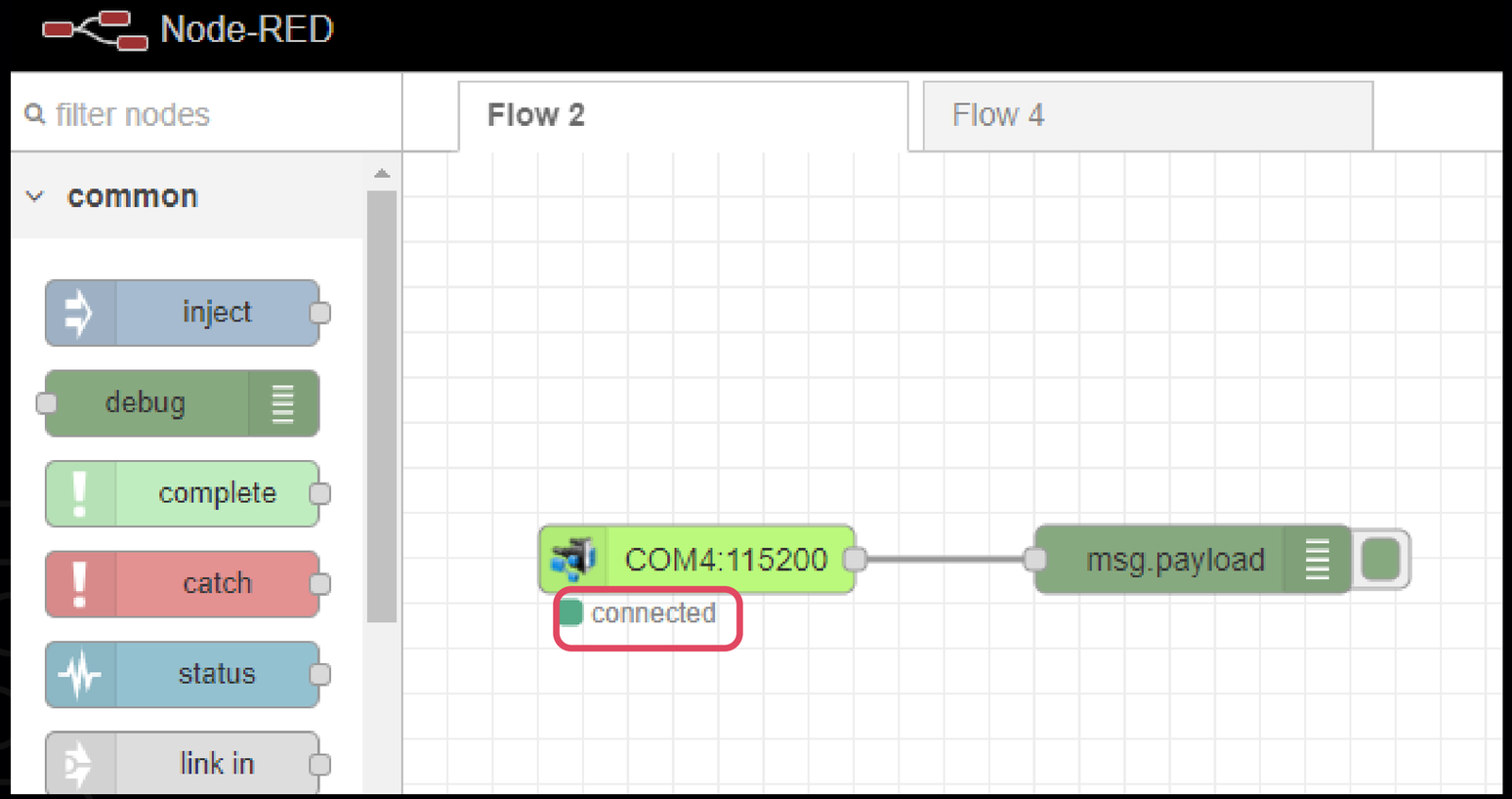
NODE-RED SERIAL PORT DATA RECEIVING

Drag and drop the debug node into the working space, and connect the COM4 node to the msg.payload. Then click the Deploy button

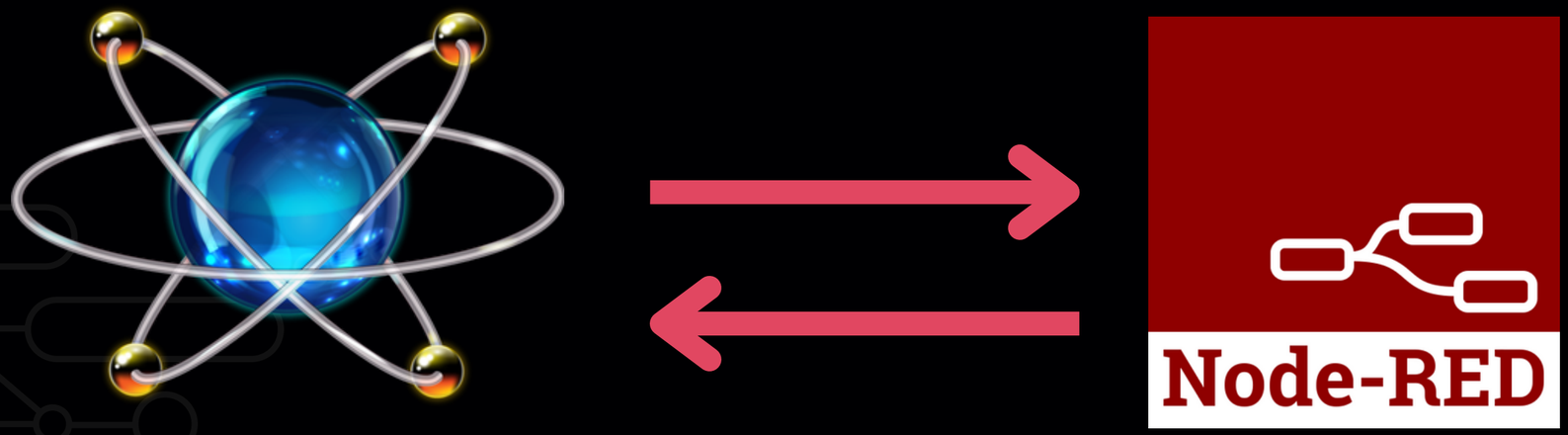


NODE-RED SERIAL PORT DATA RECEIVING

If all previous steps are corrected, the COM4 node (serial in node) shows a green dot with “connected”

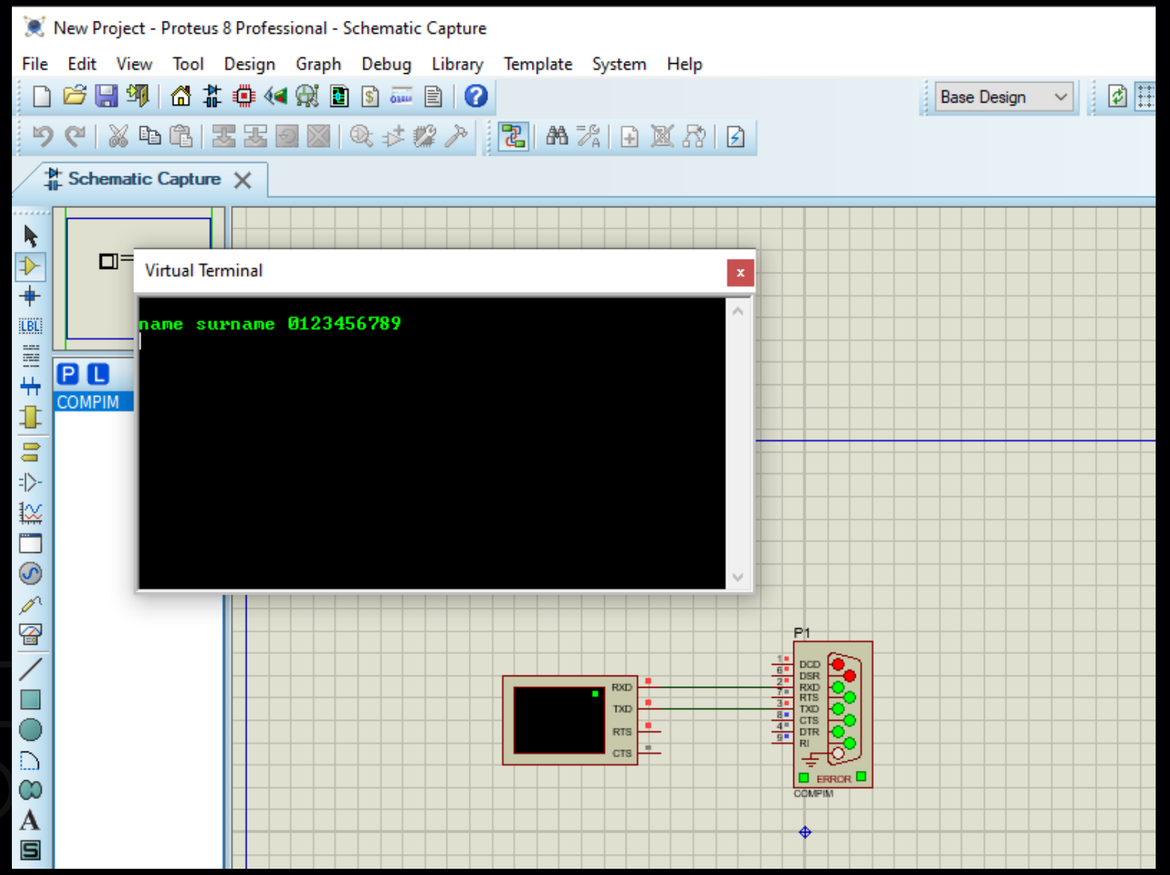


PROTEUS AND NODE-RED DATA TRANSMISSION



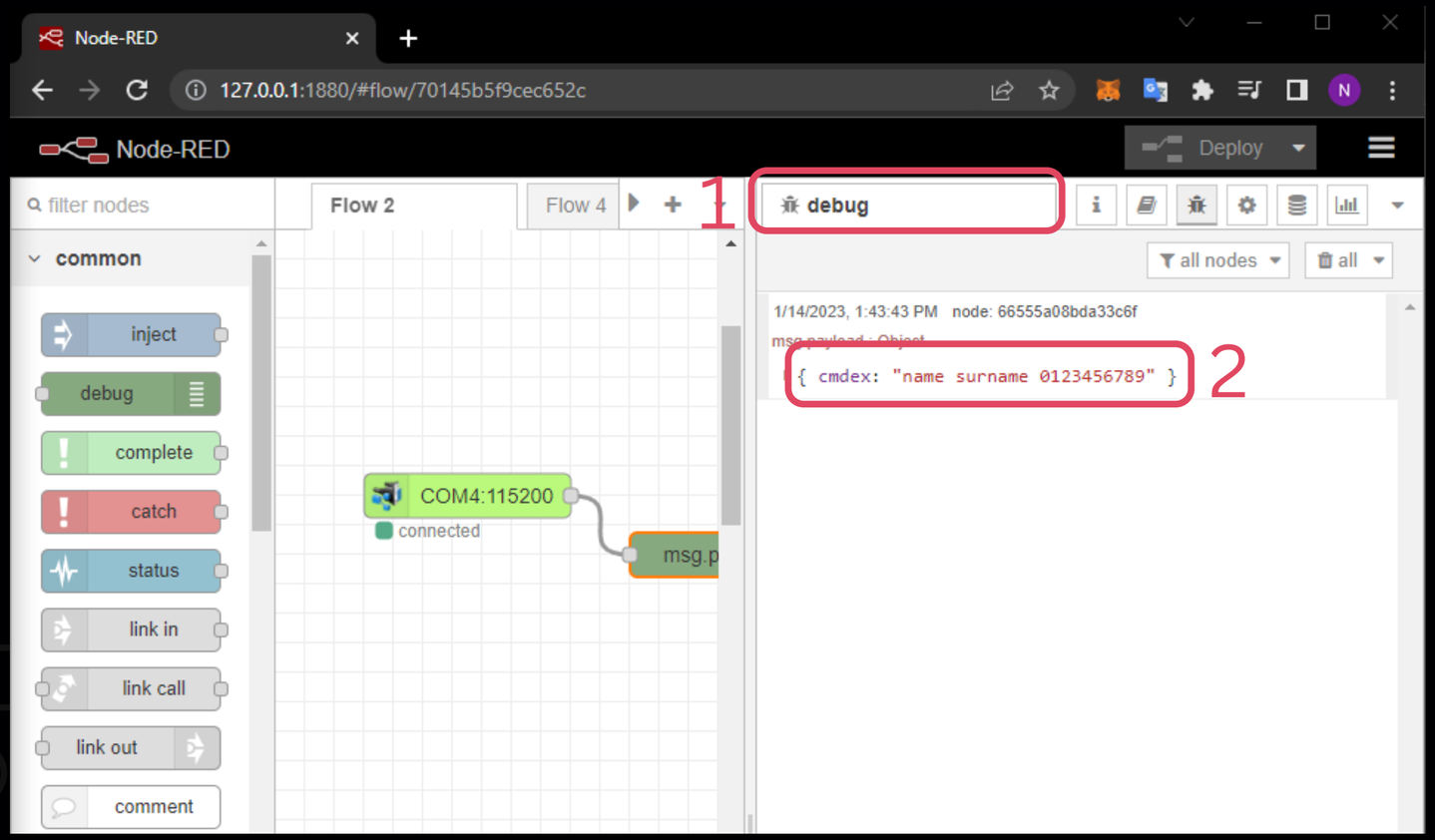
PROTEUS SERIAL PORT DATA TRANSMISSION

Restart the simulator (click stop and start), and input your name and student ID into the Virtual Terminal window, then press key ENTER



PROTEUS SERIAL PORT DATA TRANSMISSION

Click the debug tab to check the message sent from the Proteus



ASSIGNMENT

Instruction:

- **The debug window of the Node-RED will show name ,surname and student id from Proteus.**

Submission:

- **Capture your screen that showing both Proteus and Node-RED applications. Be sure all information is shown .**