La... Try HackMD (https://hackmd.io?utm_source=view-page&utm_medium=logo-nav)

Lab10: Test Program Setup Tutorial

Reference: https://hackmd.io/mjG1ikd4Q7un420LOI-xwg?both (https://hackmd.io/mjG1ikd4Q7un420LOI-xwg?both)

Download Lab10 files: https://drive.google.com/drive/folders/1s-kGenPWxICOP4O9L65akEVo_8QKyXEa (https://drive.google.com/drive/folders/1s-kGenPWxICOP4O9L65akEVo_8QKyXEa)

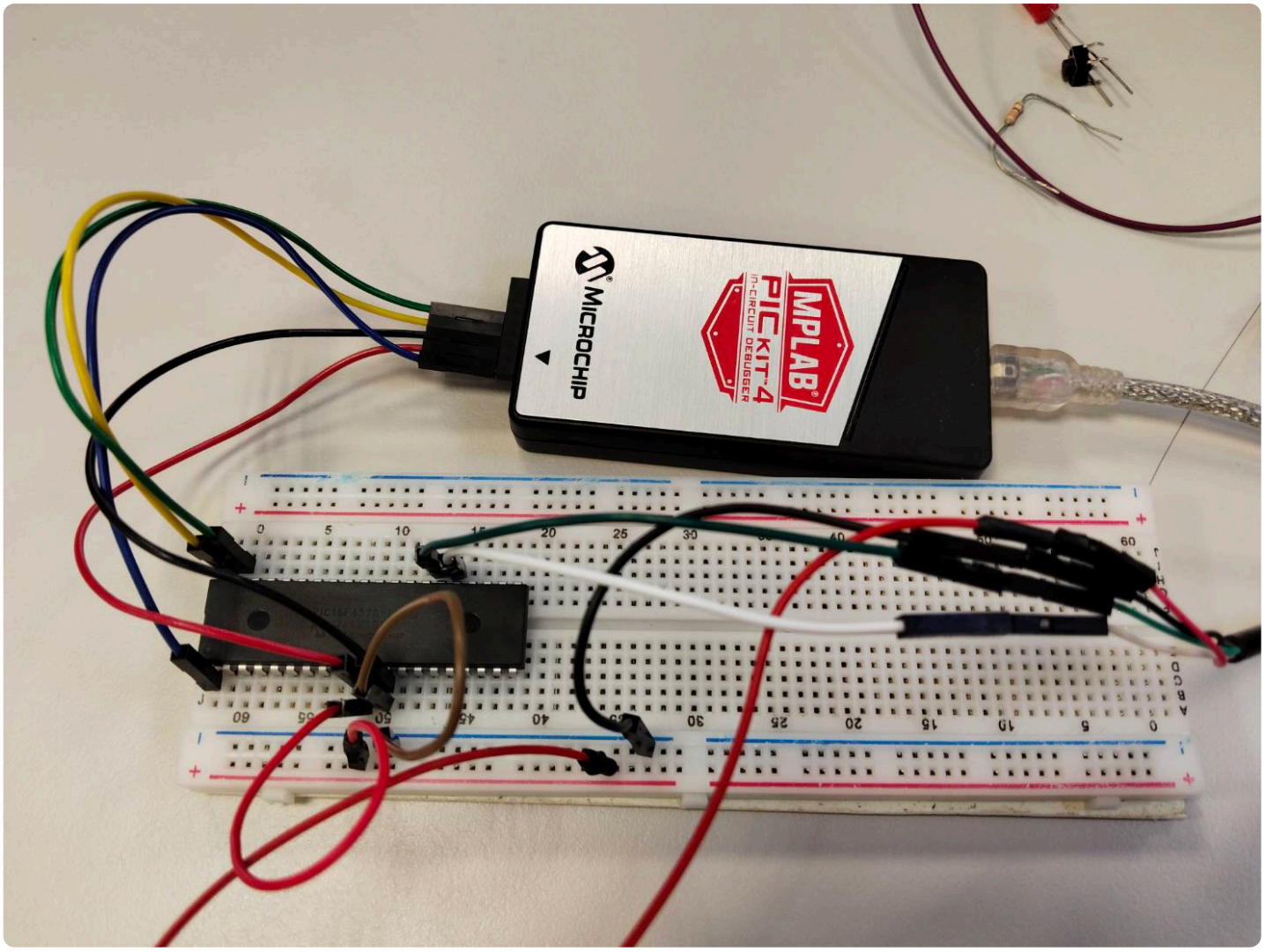
Download Putty: https://www.putty.org/ (https://www.putty.org/)

> ⓘ Please download `_test_uart.zip_` (https://drive.google.com/file/d/1u6SISby0XR3CI4rUC9zPXD2I455ygCJ9/view?usp=sharing) first

Project Setting

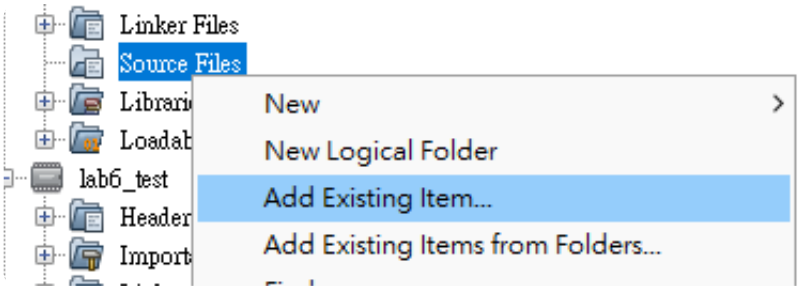
Create a new standalone project with the following settings

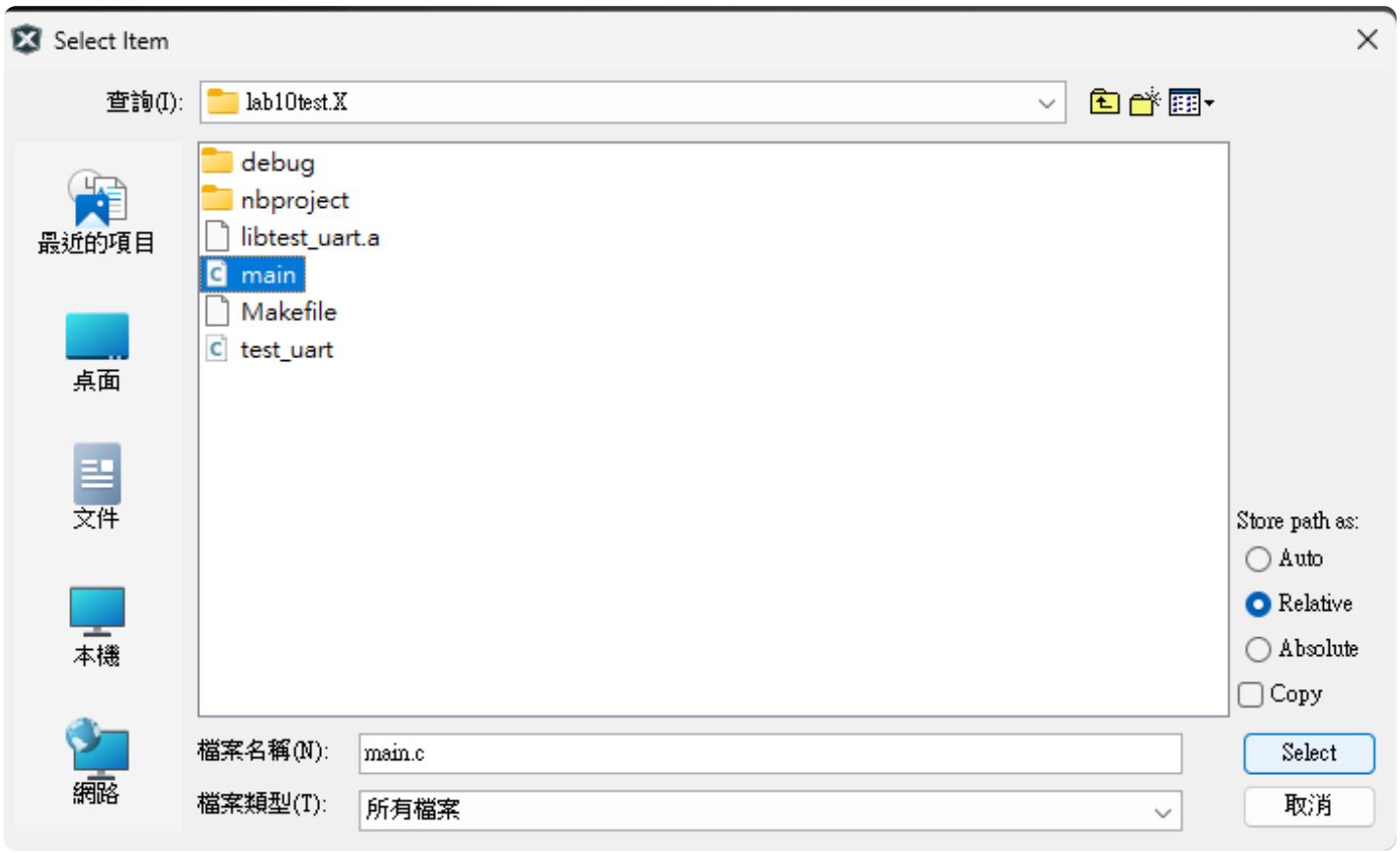
- **Device**: PIC18F4520
- **Hardware Tool**: PICkit 3 / PICkit 4
- **Compiler**: XC8
- **Encoding**: UTF-8



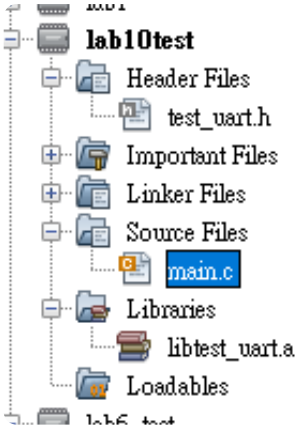
Extract `test_uart.zip` then add `test_uart.h`, `libtest_uart.a` and `main.c` into your project.

- Source Files - main.c
- Header Files - test_uart.h
- Libraries - libtest_uart.a





The project layout should like the picture shown below:

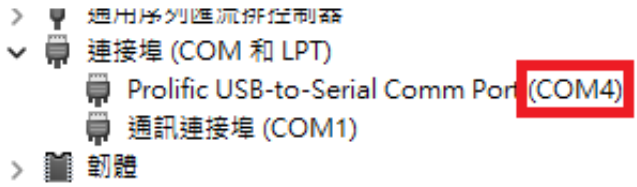


Wiring

- Connect PIC18F's RC6(TX) to the `white` wire of the UART.
- Connect PIC18F's RC7(RX) to the `green` wire of the UART.

Run and Test

First, right click on the windows icon on the left-bottom of your screen, select and open `Device Manager` to check which port your UART is using (it might be `COM1`, `COM2` or `COM3`). It is `COM3` in the below example.

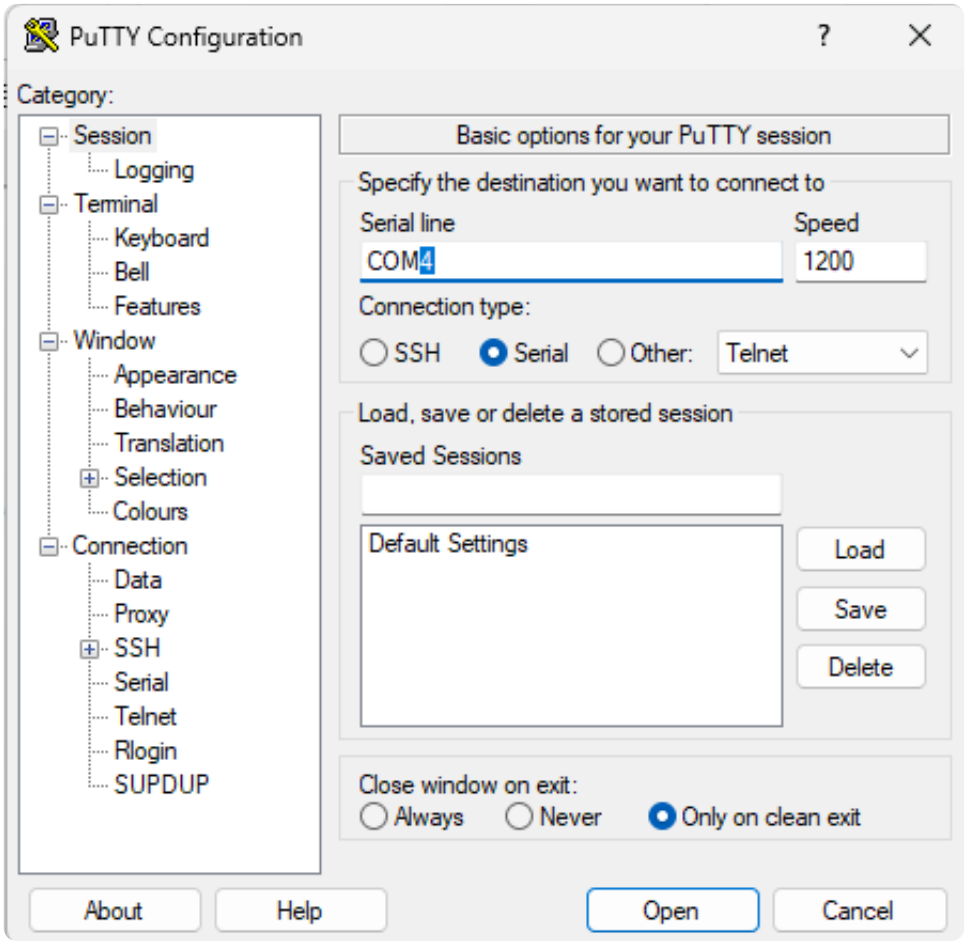


⚠️ If Prolific driver can not be recognized as above, please use the given driver (https://drive.google.com/file/d/1arQNCsTusPRYLMo31AqB9DzZkiQ43D8V/view?usp=sharing) with the following steps:

- install `driver.exe`
- right click on the unrecognized port in Device Manager
- update device driver on your computer
- choose the old version (`3.3.2.105`).

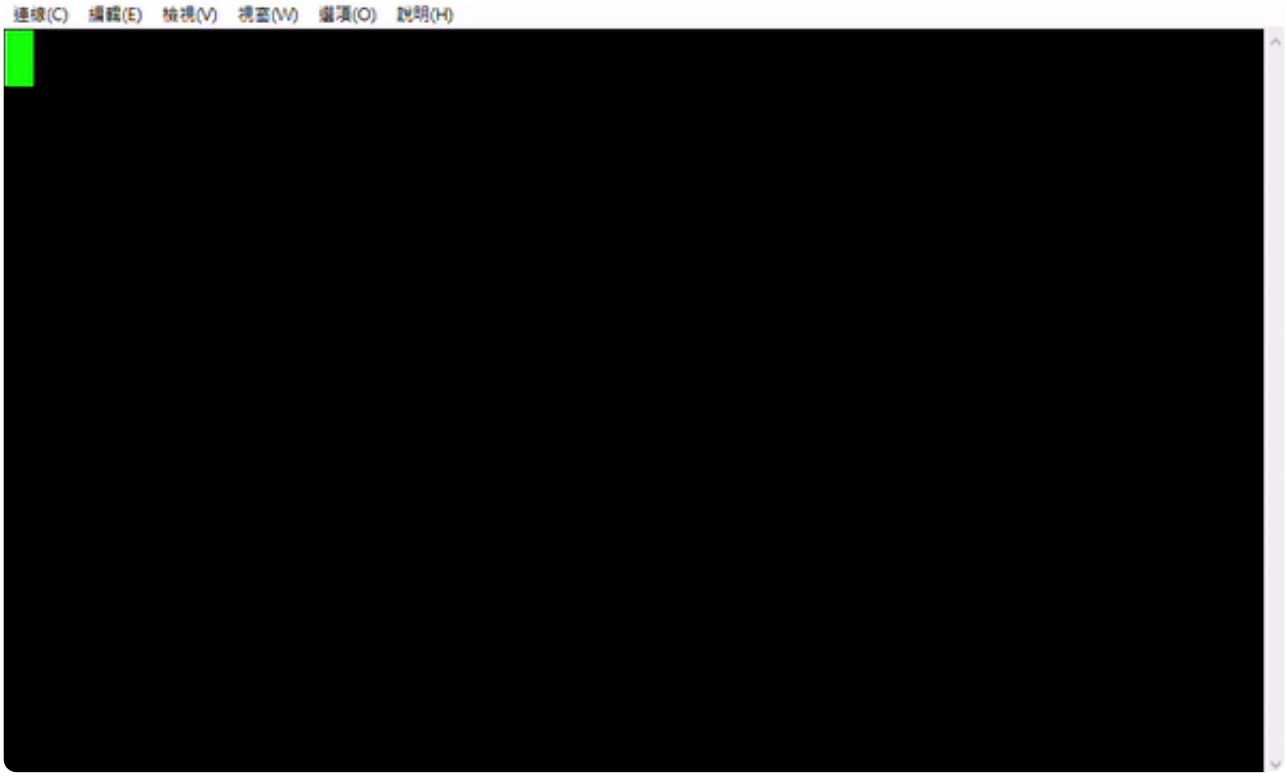
Then you should see a recognized COM* just like the above example.

Open `PuTTY` and specify your **Serial line** to `COM3` and set **Speed** to `1200` then press `Open` .



> ⓘ You can get PuTTY from putty.org (http://putty.org)

If your hardware is connected and set up properly, you can enter some text and see the direct output on the screen.



> Congrat that you have completed the test program! Good luck for Lab 10 💯