

# 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).

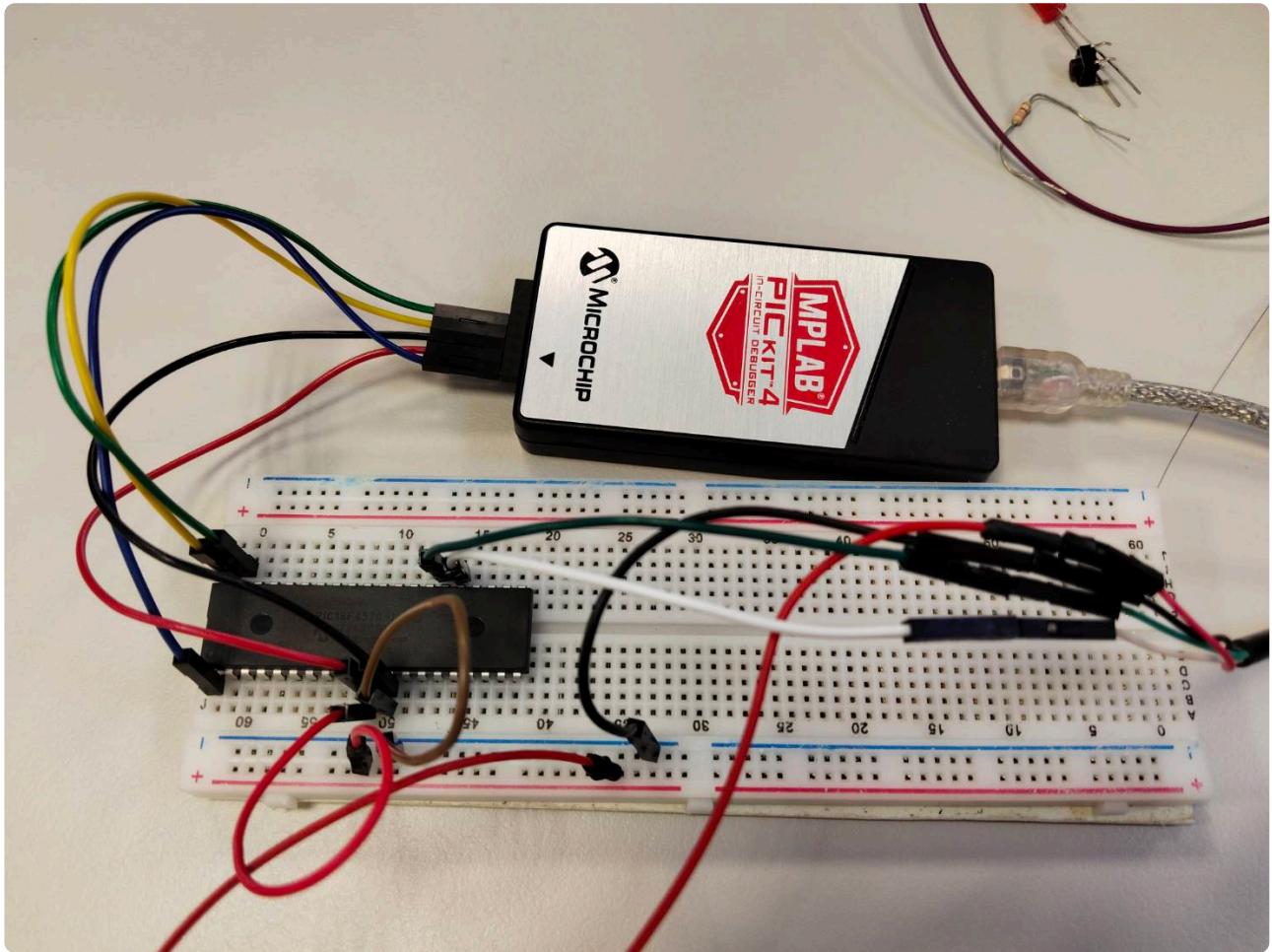
Download Putty: [\(https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html\)](https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html).

 Please download [test\\_uart.zip](https://drive.google.com/file/d/1u6SISby0XR3CI4rUC9zPXD2I455ygCJ9/view?usp=sharing) (https://drive.google.com/file/d/1u6SISby0XR3CI4rUC9zPXD2I455ygCJ9/view?usp=sharing) first

## Project Setting

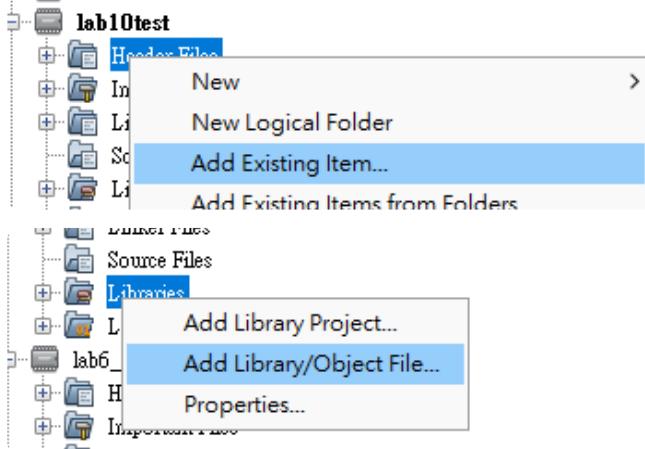
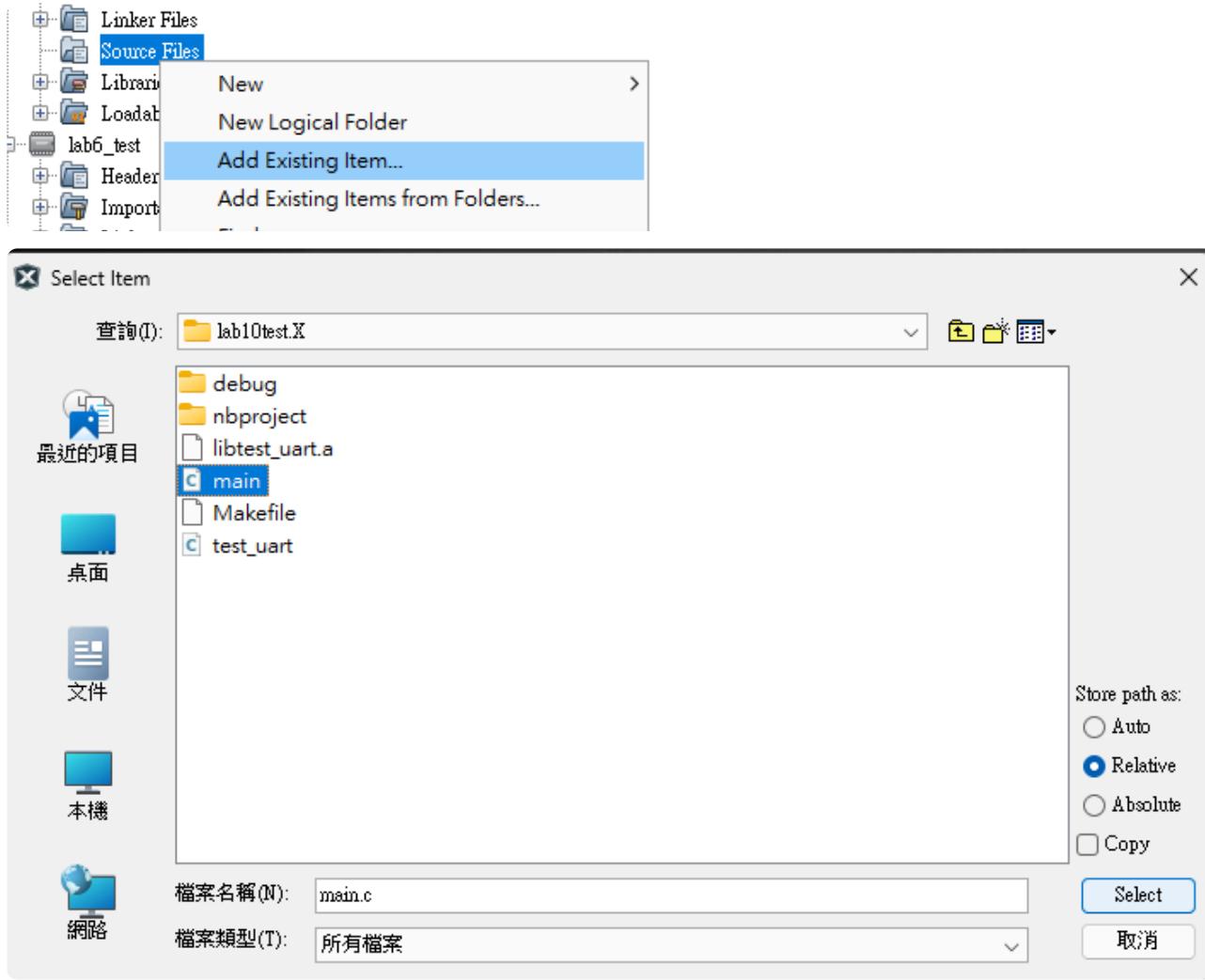
Create a new standalone project with the following settings

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

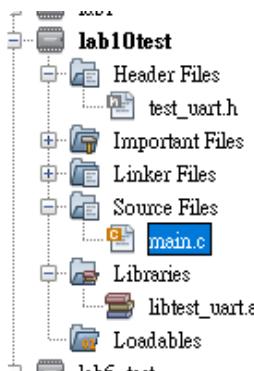


Extract `test_uart.zip` then add `test_uart.h`, `libtest_uart.a` and `main.c` into your project.

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



The project layout should like the picture shown below:

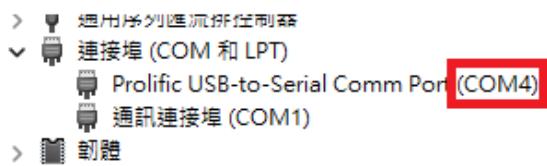


## Wiring

- 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.

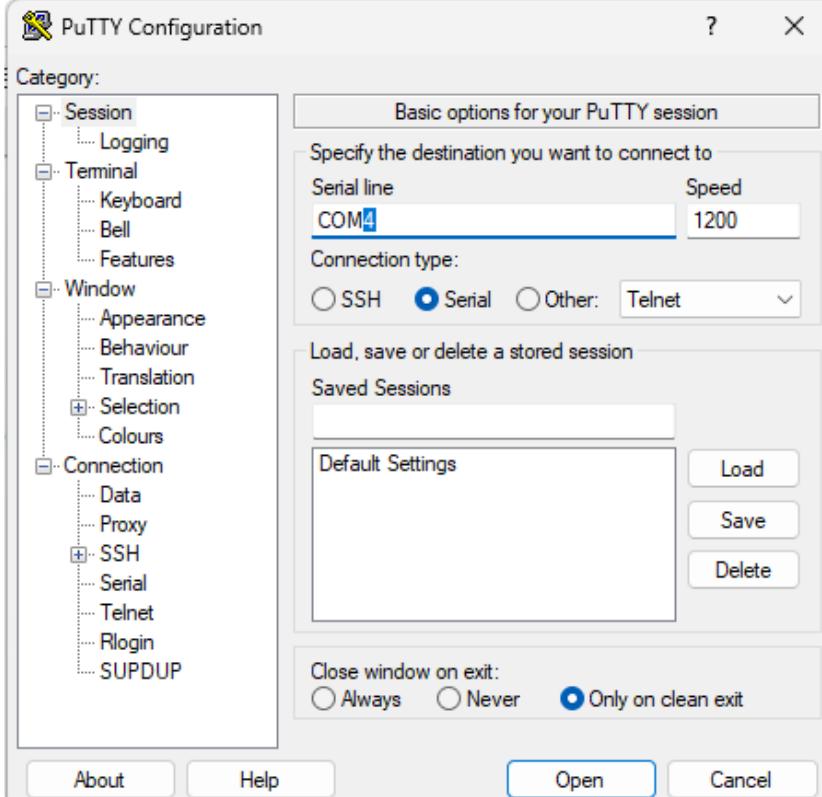


**⚠** If Prolific driver can not be recognized as above, please use the [given driver](https://drive.google.com/file/d/1arQNCsTusPRYLMo31AqB9DzZkiQ43D8V/view?usp=sharing) (<https://drive.google.com/file/d/1arQNCsTusPRYLMo31AqB9DzZkiQ43D8V/view?usp=sharing>) with the following steps:

- 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) (<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 10 100

