

Lab 11: Requirement Description

- UART
 - Video: https://youtu.be/tmn_5zm7IEU
 - HackMD: https://hackmd.io/@oscarshiang/mplab_uart
 - Testfile and template:
<https://drive.google.com/drive/folders/1guddUfio3dtfr0J8HA9oPGIHploTzMLb?usp=sharing>
- Testing (0%)
 - Description: Follow the instruction in HackMD to test our UART cable can perfectly function. Please check all the factor (**baud rate match** especially) that will cause you receive wrong/none message on Putty before you reach out to TAs for cable replacement.
- Basic (60%)
 - Description: Implement your own tester which allows you print what you' ve key on keyboard. However, in this case, your baud rate should be 2400. You can use Sample Code then complete UART_Initialize() and MyusartRead() functions in setting_hardware/uart.c to achieve that.

- Advance(40%)

- Description:

Followed by Basic Baud rate is 2400, please implement two mode in main.c

Mode1:

Enter "mode1" to enter Mode1.

When enter mode1, show "enter mode 1" on screen.

Automatically exit Mode1.



Mode2:

Enter "mode2" to enter Mode2.

When enter mode2, show "enter mode 2" on screen.

Then **serially list the input voltage** round down to the second digit after the decimal point on screen. (i.e. 0.00~5.00). When turning the changeable resistor, the voltage shown varies.

Enter "e" to exit Mode2.

```
COM3 - PuTTY
mode2enter mode 20.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
3 0.21 0.40 0.51 0.59 0.65 0.74 0.87 1.01 1.11 1.22 1.30 1.37 1.48 1.60 1.71 1.7
8 1.85 1.95 2.04 2.15 2.26 2.35 2.43 2.51 2.60 2.71 2.83 2.98 3.09 3.21 3.32 3.3
9 3.57 3.73 3.84 3.92 4.02 4.09 4.22 4.32 4.35 4.45 4.51 4.65 4.70 4.84 4.92 5.0
0 4.99 4.96 4.99 4.99 5.00 4.96 4.99 5.00 5.00 4.98 5.00 5.00 5.00 4.99 5.00 5.0
0 5.00 4.98 5.00 e
```