Report for Peer Graded Assignment: Assignment 1

Source code:
https://github.com/wantingchen/FreeRTOS-GCC-ARM926ejs

Environment for test: Ubuntu 16.04

First I need an environment to run FreeRTOS. To do let we must have:

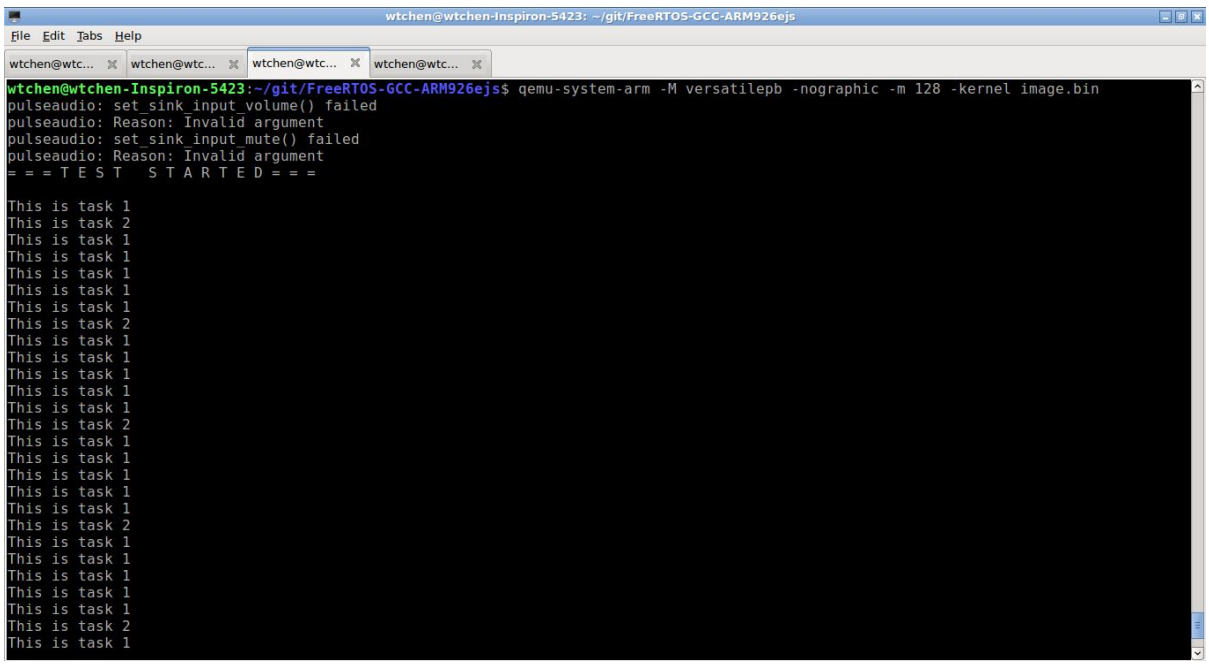
1. A real hardware or machine emulator which FreeRTOS can be install in it.
2. One set of library/driver which allows FreeRTOS to control the hardware.
3. FreeRTOS source code.
4. A main.c which creates the required tasks.

I make a fork from here : https://github.com/jkovacic/FreeRTOS-GCC-ARM926ejs , which is the FreeRTOS (v9.0.0) ported to ARM Versatile Platform Baseboard, based on the ARM926EJ-S CPU. In the other words, this project contains the 2. and 3. of the above requirements, then I could modify the main.c which satisfies the requirements of this assignment. In order to use the syntax of C11, I have added GCC flag -std=gnu11. I don't use printf or fflush since they don't work on a machine which has no stdout (you cannot assume there is a screen). I transmit words to UART device and let it show on the screen.

(Since v.9.0.0 is the latest version, and I also asked on forum if I can use this version but no response, so I assume the professor agrees.)

I use QEMU, a generic and open source machine emulator and virtualizer, to emulate the ARM926ejs. You can install qemu-system-arm by using apt-get in ubuntu.

Here is the screenshot of the execution:



Reference :

- http://wiki.qemu.org/download/qemu-doc.html#ARM-System-emulator