ChibiOS on Raspberry

Link to get some help (from the creator of the ChibiOS port for the RPi):
https://www.stevebate.net/chibios-rpi/GettingStarted.html

1. You need to install the arm cross compiler in order to compile the kernel
   a. If you are on Linux, sudo apt-get install gcc-arm-none-eabi
   b. If you are on Windows, developer.arm.com > tools & and Software > open source Software > GNU Toolchain > Embedded (or search for YAGARTO)

2. Download the Raspberry B ChibiOS Port from github:
   https://github.com/steve-bate/ChibiOS-RPi

3. Download the firmware files from the github:
   a. start.elf & bootcode.bin

Name	Date modified	Type	Size
start.elf	11/10/2020 12:28	ELF File	2.881 KB
bootcode.bin	11/10/2020 12:27	BIN File	52 KB

   https://github.com/raspberrypi/firmware

4. Having everything, we need to connect the SD Card on the computer and format it in FAT32 (save a backup of the files previously inside it).
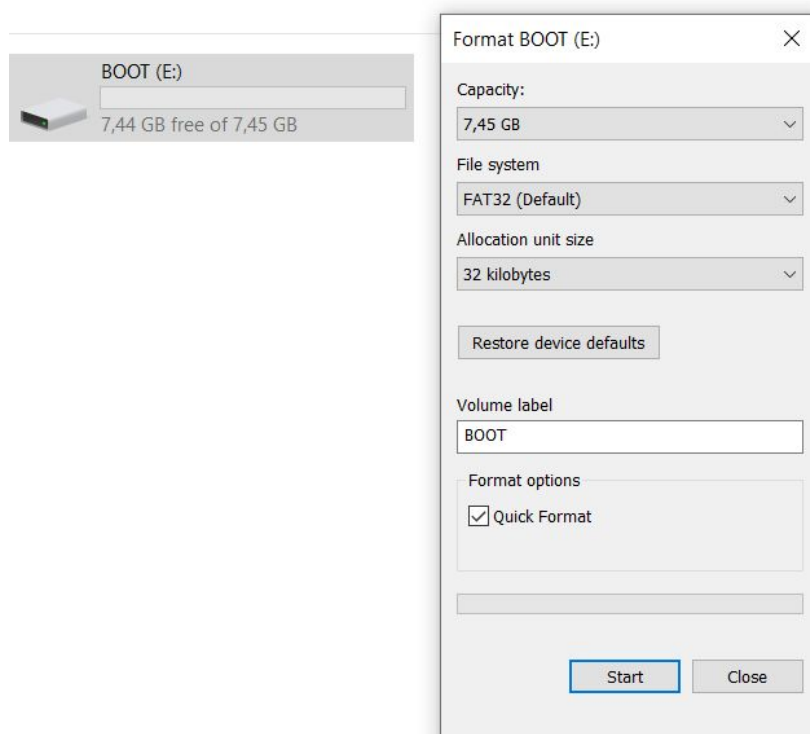
5. Now, navigate to the folder \ChibiOS-RPi-master\demos\ARM11-BCM2835-GCC of the ChibiOS Port. (This folder will compile a demo project for our Raspberry model).

6. Type 'make' to build the code, if everything worked, it will create a sub-folder called build with a file named ch.bin inside it.

7. Rename the ch.bin you just created to kernel.img.

8. Copy the start.elf, bootcode.bin and kernel.img to the SD card.

9. Now plug the SD card on the raspberry and it's done, a demo project is prepared to be used. (We can use this demo project as a model to our needs, just modifying it.)