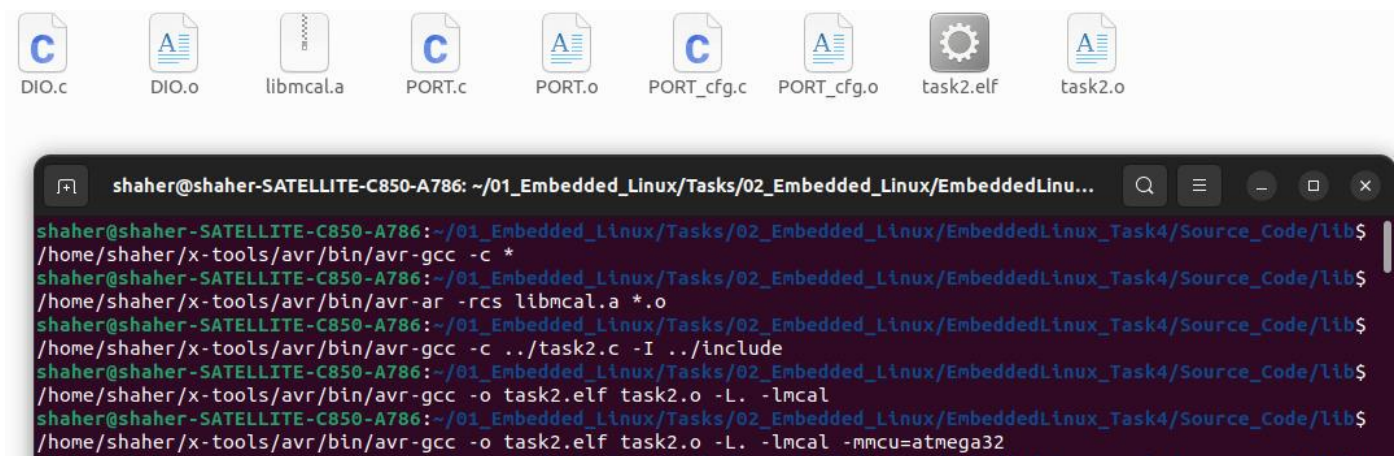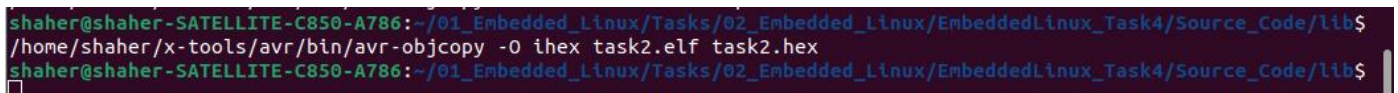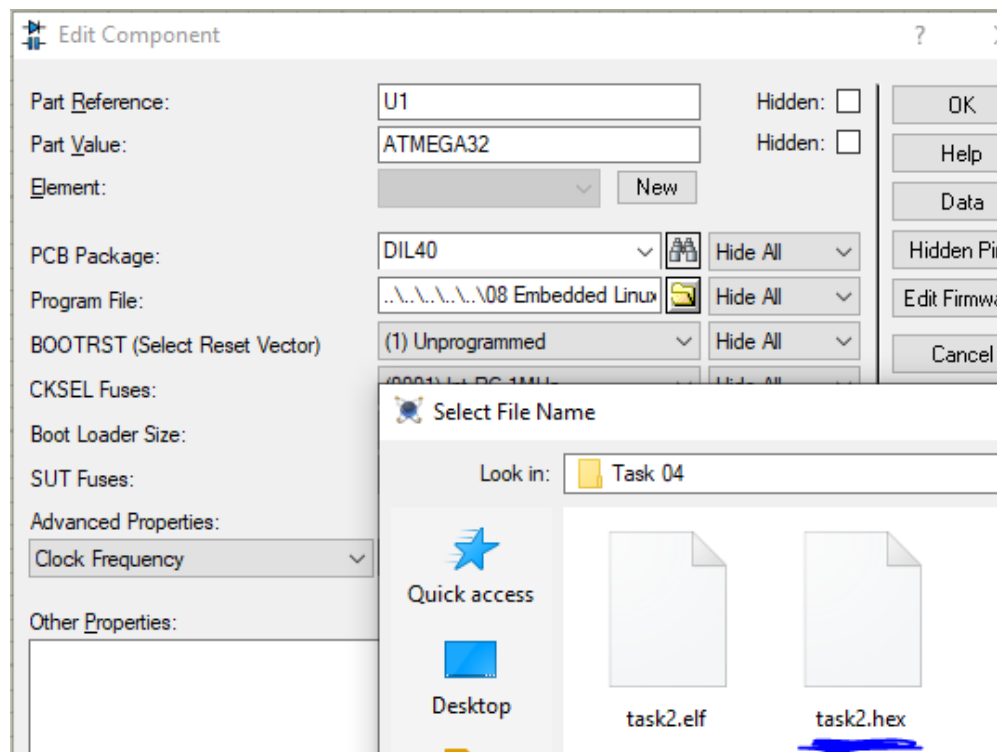**First, I generate the static library, linked it to the application file and generate an elf file for ATmega32:**
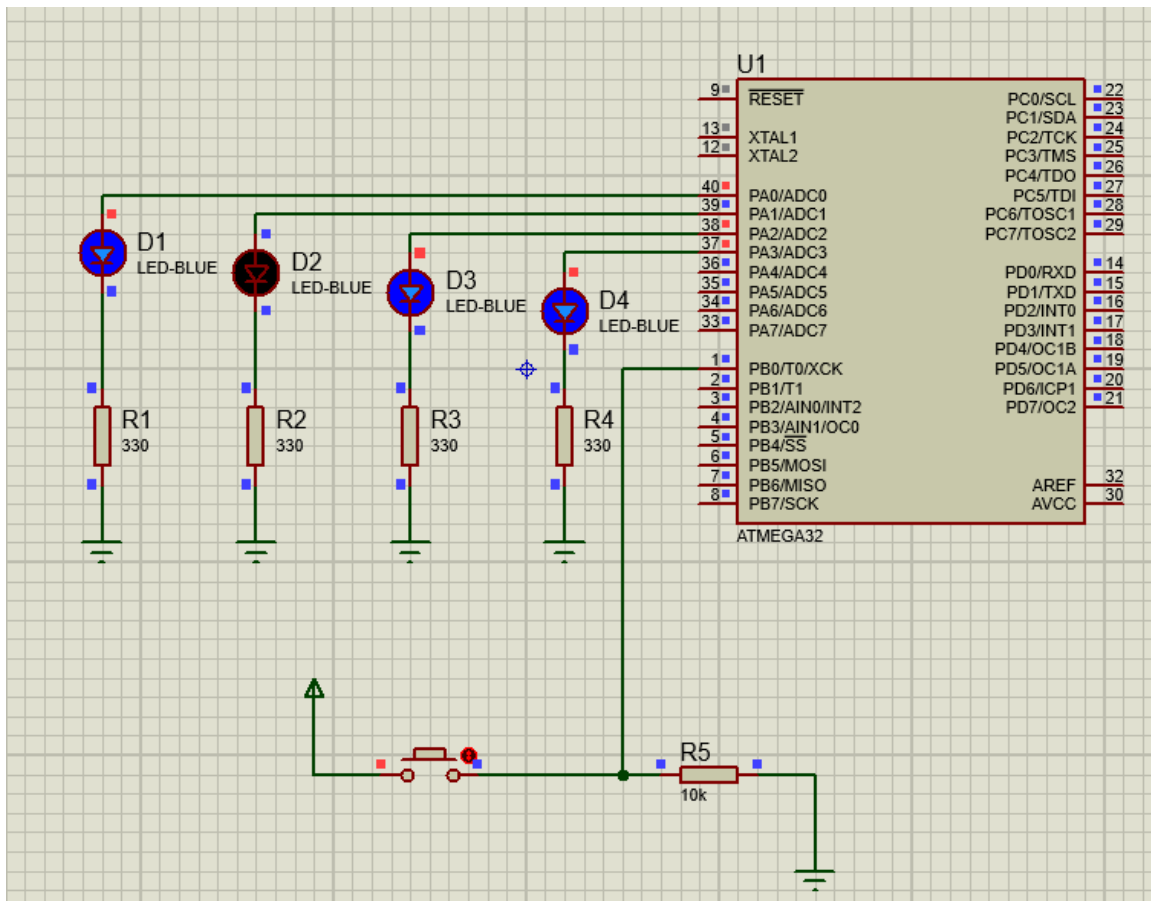

Then I extract the hex file from the elf file:

Then I switched to windows to run the hex file on proteus:

Here is the simulation running (I know it is just a picture but I rely on the mutual trust :))

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For the last question:

Because in AVR there is no system loader to detect the needed dynamic library and link it the file at the run time, and also because of the limited resources in the AVR and the dynamic linking requires high processing power. Dynamic libraries are only used when there is an OS (system loader) that could handle this mission of linking the needed libraries during the run time.