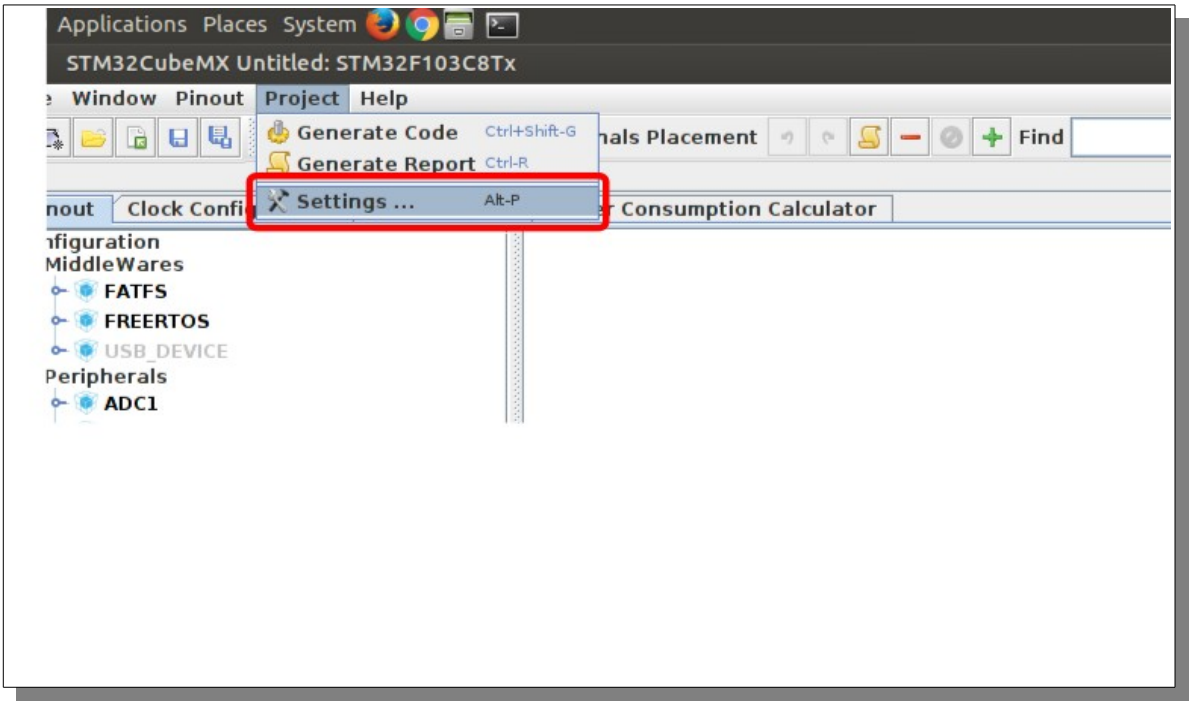
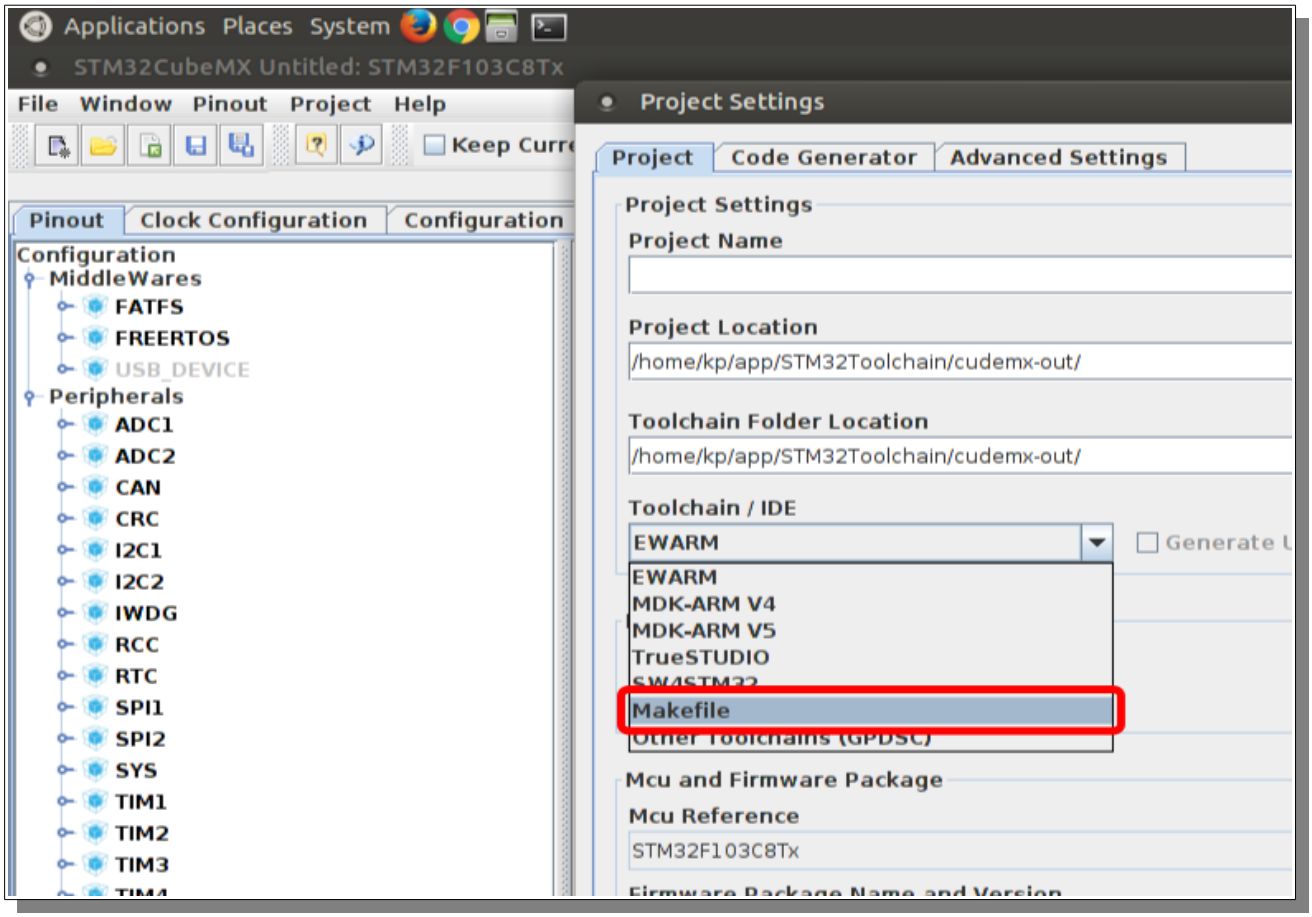
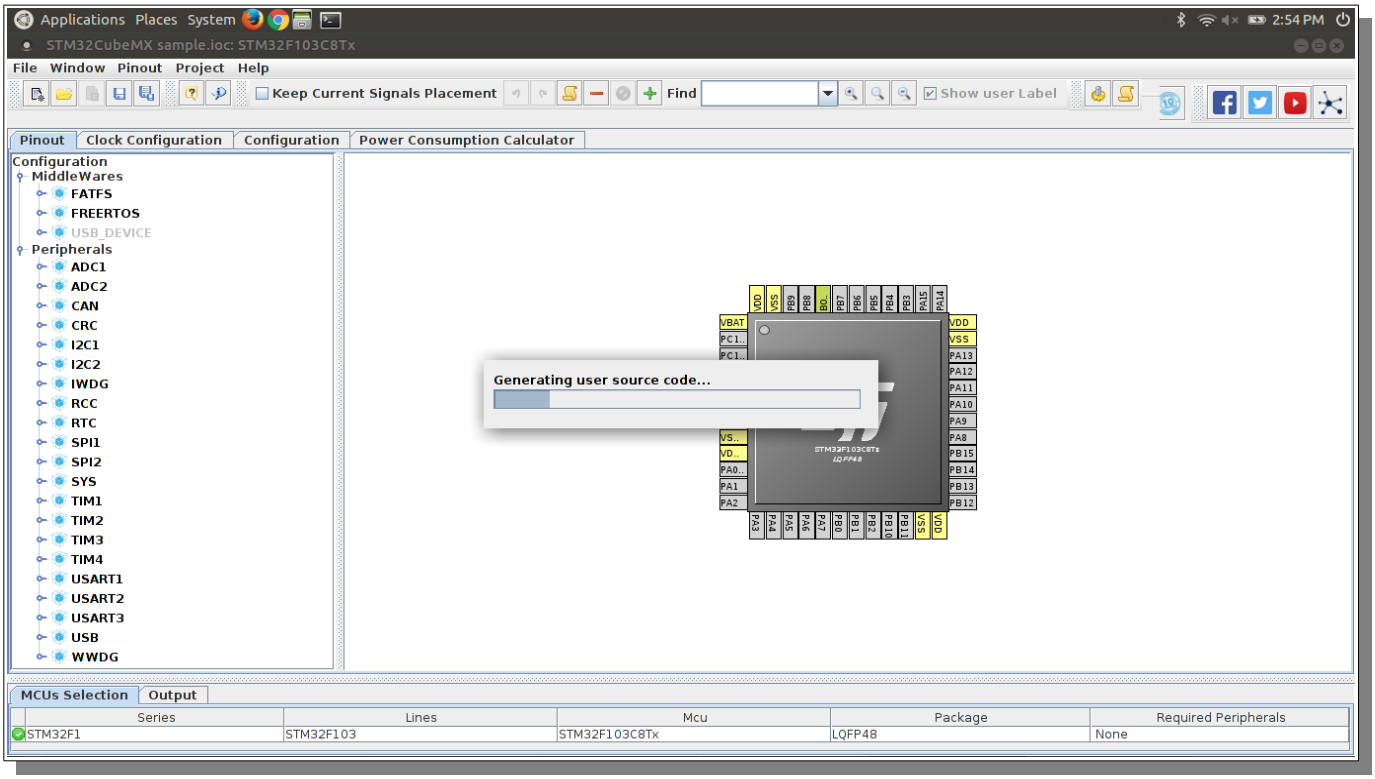
1. Open the STM32CubeMX and select the chip, make changes and go to Project -> Settings



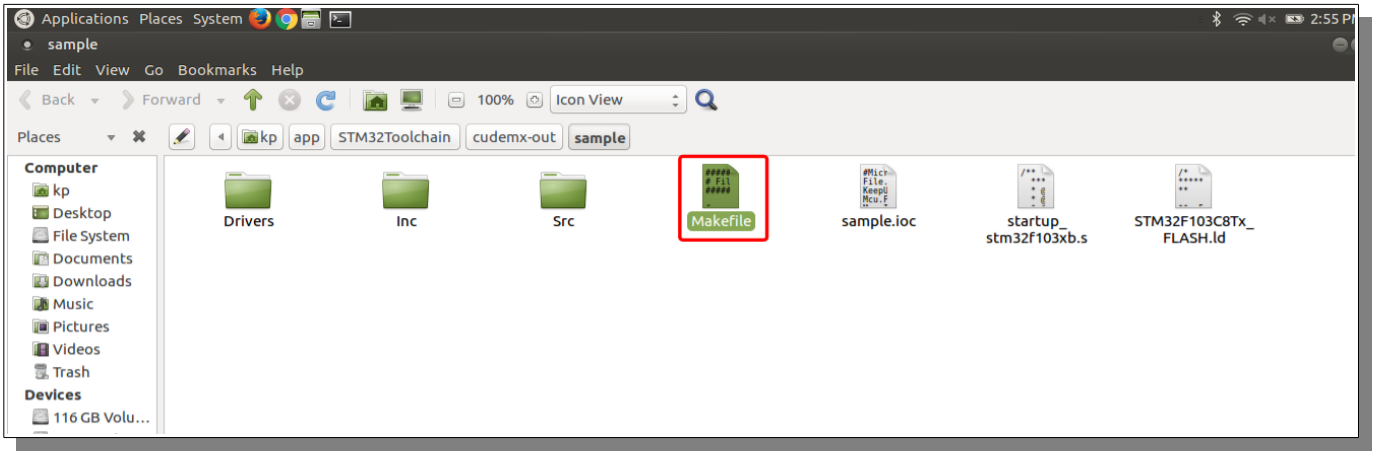
2. In the Toolchain /IDE section, select Makefile option



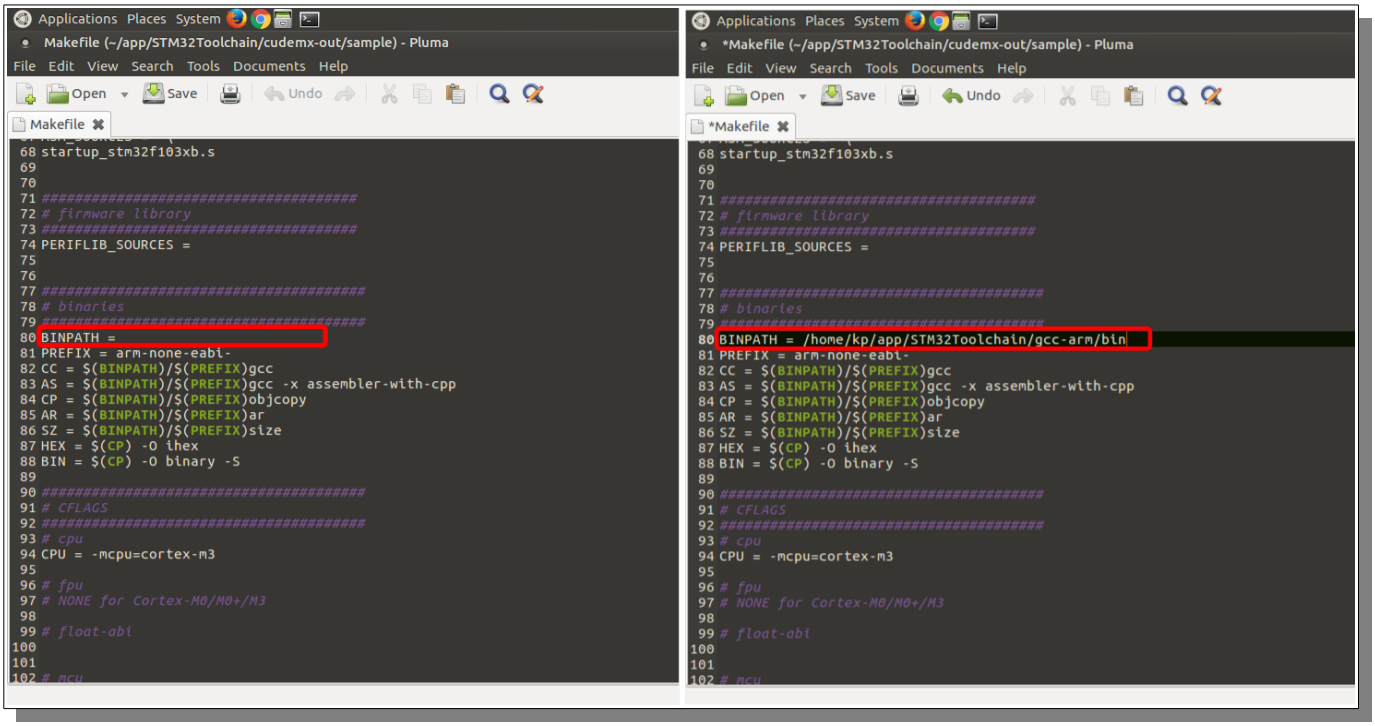
3. Click OK to generate code.



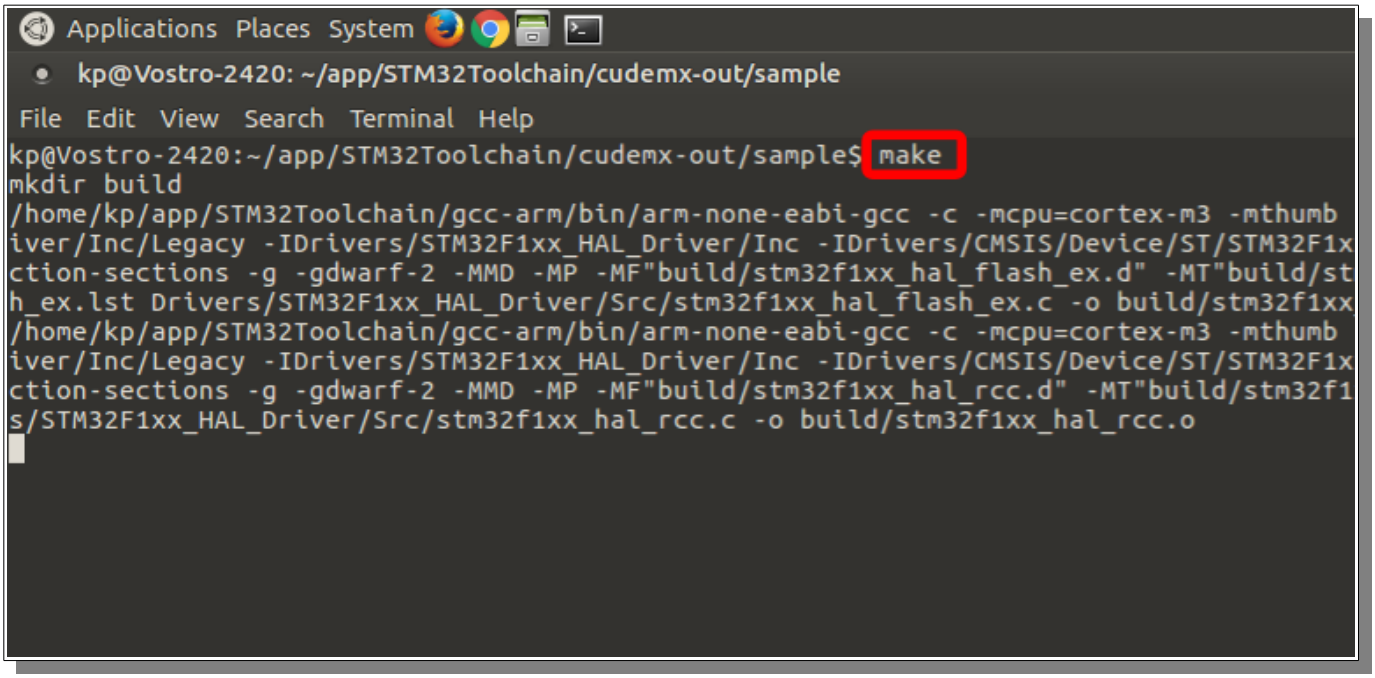
4. Makefile generated along with other files



5. Set BINPATH to your arm-gcc compiler directory



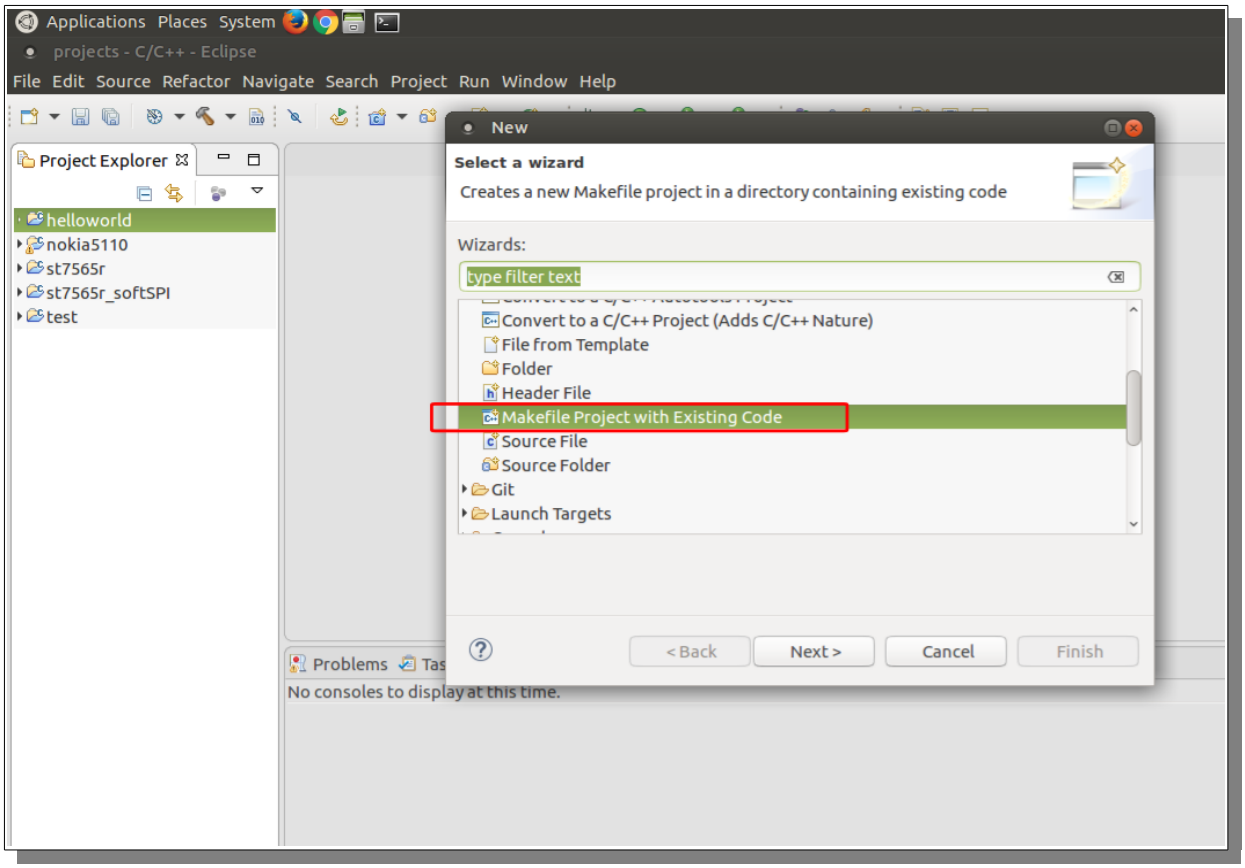
6. Build the project with make command



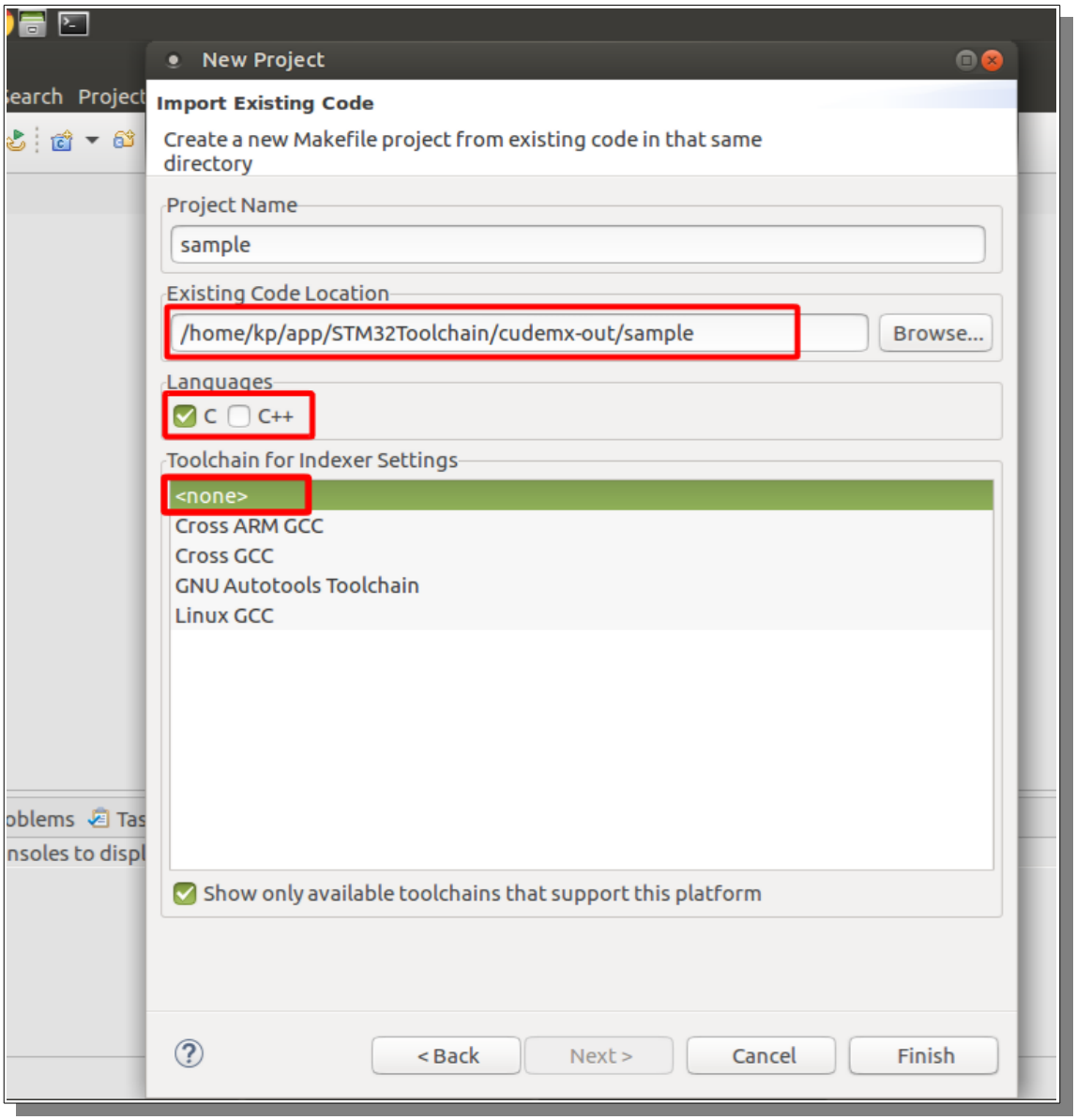
7. This make script generate three files .elf .hex and .bin, what is nice about this script is that .bin and .hex files can be used with utilities like stm32flash and st-utils for flashing into microcontroller.

```
iver/Inc/Legacy -IDrivers/STM32F1xx_HAL_Driver/Inc -IDrivers/CMSIS/Device/ST/STM32F1xx/Include -IDrivers/CMSIS/I
ction-sections -g -gdwarf-2 -MMD -MP -MF"build/stm32f1xx_hal_gpio_ex.d" -MT"build/stm32f1xx_hal_gpio_ex.d" -Wa,-
x.lst Drivers/STM32F1xx_HAL_Driver/Src/stm32f1xx_hal_gpio_ex.c -o build/stm32f1xx_hal_gpio_ex.o
/home/kp/app/STM32Toolchain/gcc-arm/bin/arm-none-eabi-gcc -x assembler-with-cpp -c -mcpu=cortex-m3 -mthumb   -DU
ivers/STM32F1xx_HAL_Driver/Inc/Legacy -IDrivers/STM32F1xx_HAL_Driver/Inc -IDrivers/CMSIS/Device/ST/STM32F1xx/Inc
 -fdata-sections -ffunction-sections -g -gdwarf-2 -MMD -MP -MF"build/startup_stm32f103xb.d" -MT"build/startup_st
build/startup_stm32f103xb.o
/home/kp/app/STM32Toolchain/gcc-arm/bin/arm-none-eabi-gcc build/stm32f1xx_hal_flash_ex.o build/stm32f1xx_hal_rcc
n.o build/stm32f1xx_it.o build/stm32f1xx_hal_rcc_ex.o build/stm32f1xx_hal_msp.o build/stm32f1xx_hal.o build/stm3
ma.o build/stm32f1xx_hal_cortex.o build/stm32f1xx_hal_flash.o build/system_stm32f1xx.o build/stm32f1xx_hal_gpio_
=cortex-m3 -mthumb   -specs=nano.specs -TSTM32F103C8Tx_FLASH.ld  -lc -lm -lnosys -Wl,-Map=build/sample.map,--cre
f
/home/kp/app/STM32Toolchain/gcc-arm/bin/arm-none-eabi-size build/sample.elf
   text    data     bss     dec     hex filename
   3432      12    1572    5016    1398 build/sample.elf
/home/kp/app/STM32Toolchain/gcc-arm/bin/arm-none-eabi-objcopy -O ihex build/sample.elf build/sample.hex
/home/kp/app/STM32Toolchain/gcc-arm/bin/arm-none-eabi-objcopy -O binary -S build/sample.elf build/sample.bin
kp@Vostro-2420:~/app/STM32Toolchain/cudemx-out/sample$
```

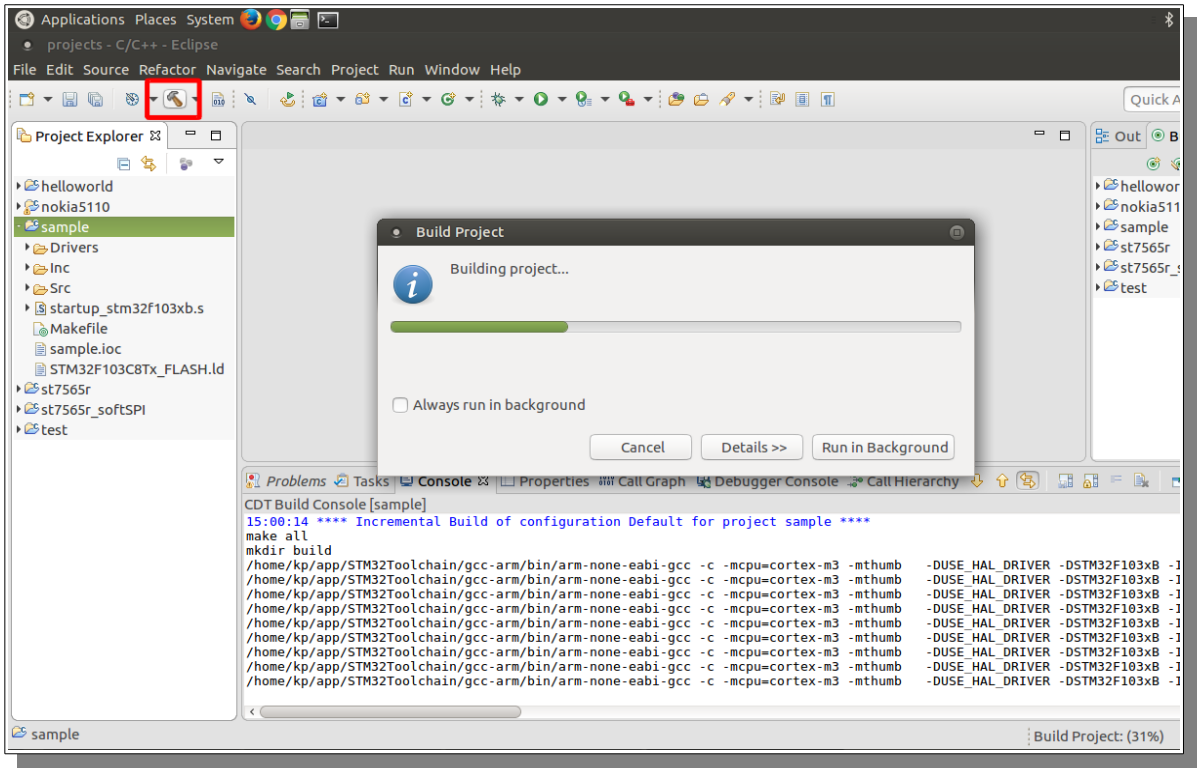
8. Generated makefile project can be used with Eclipse IDE, make a new project as shown in picture.



9. Choose the options as following



10. After making project in eclipse, just click on build button on toolbar and project will build without any problems.



11. Eclipse also give the same results.