Build STM32fxx with Eclipse, GCC

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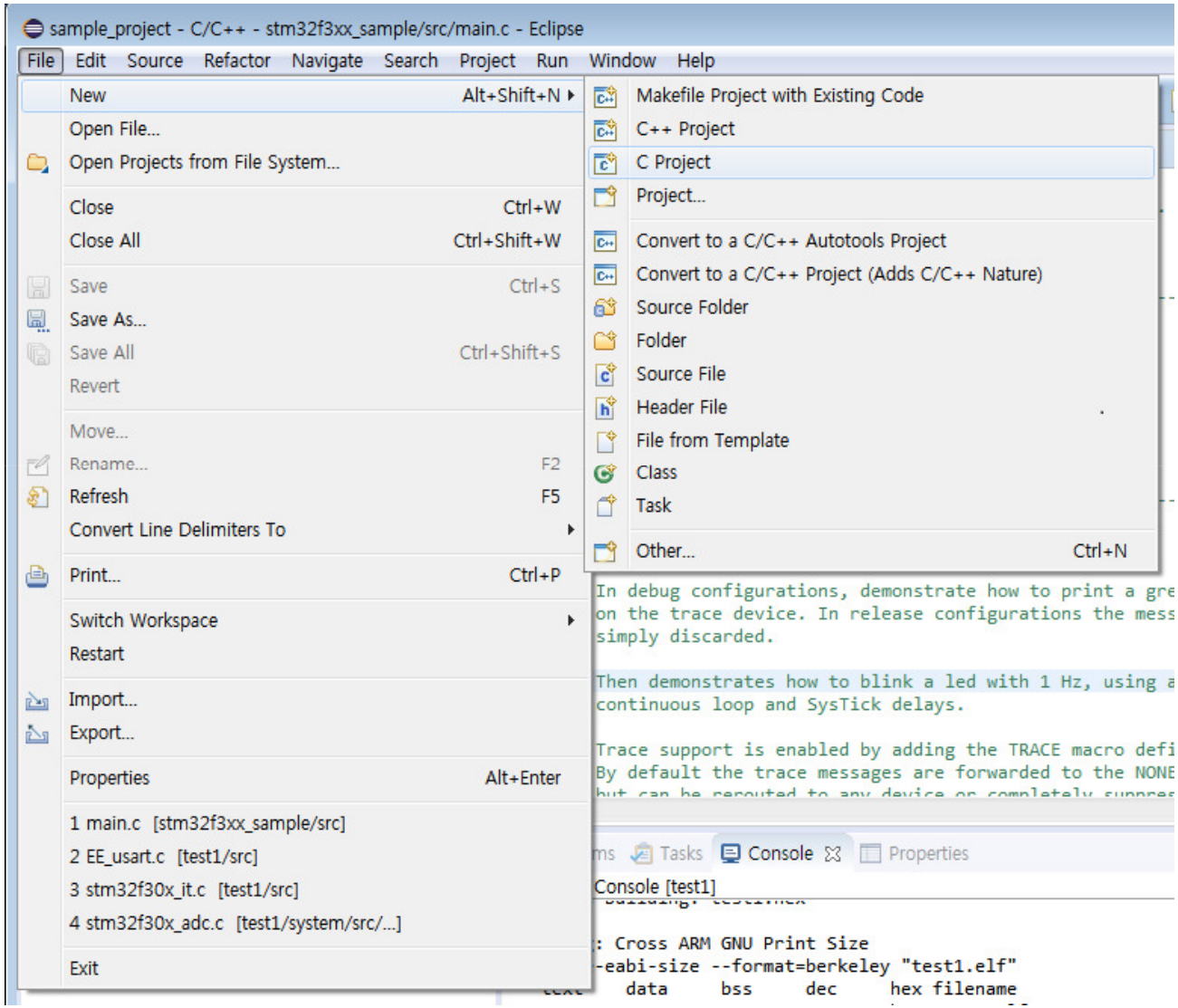
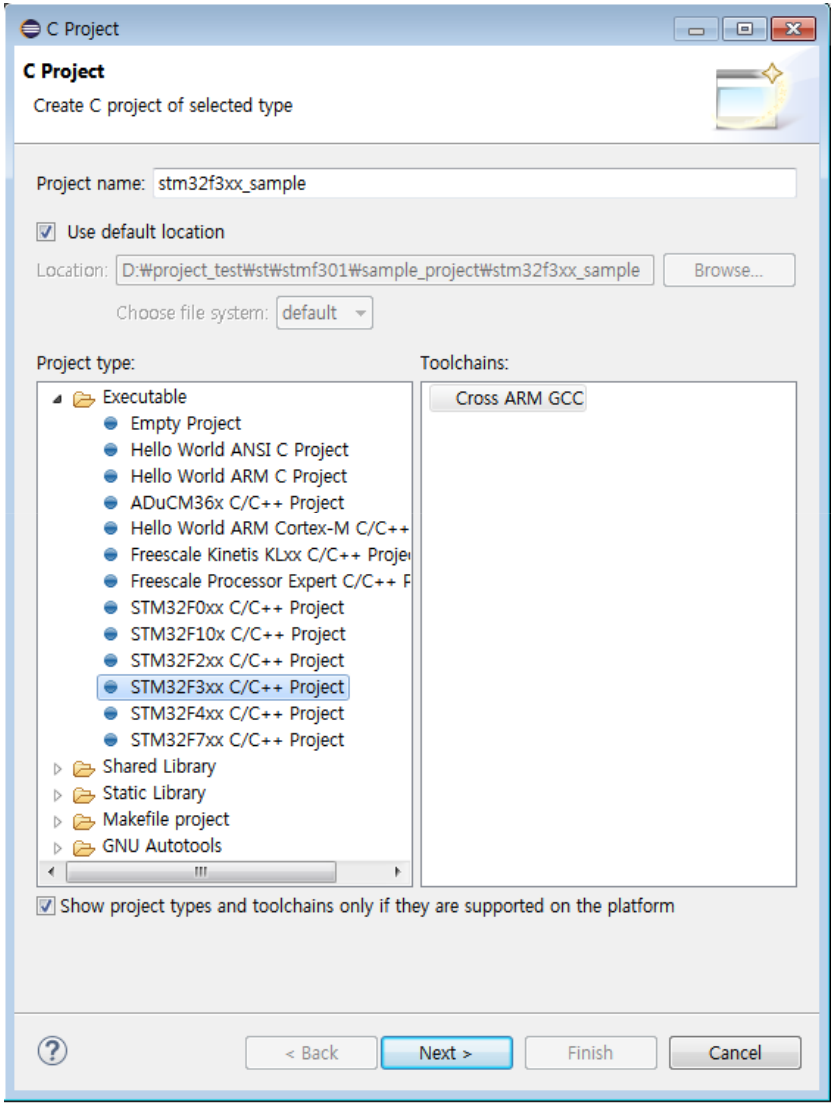
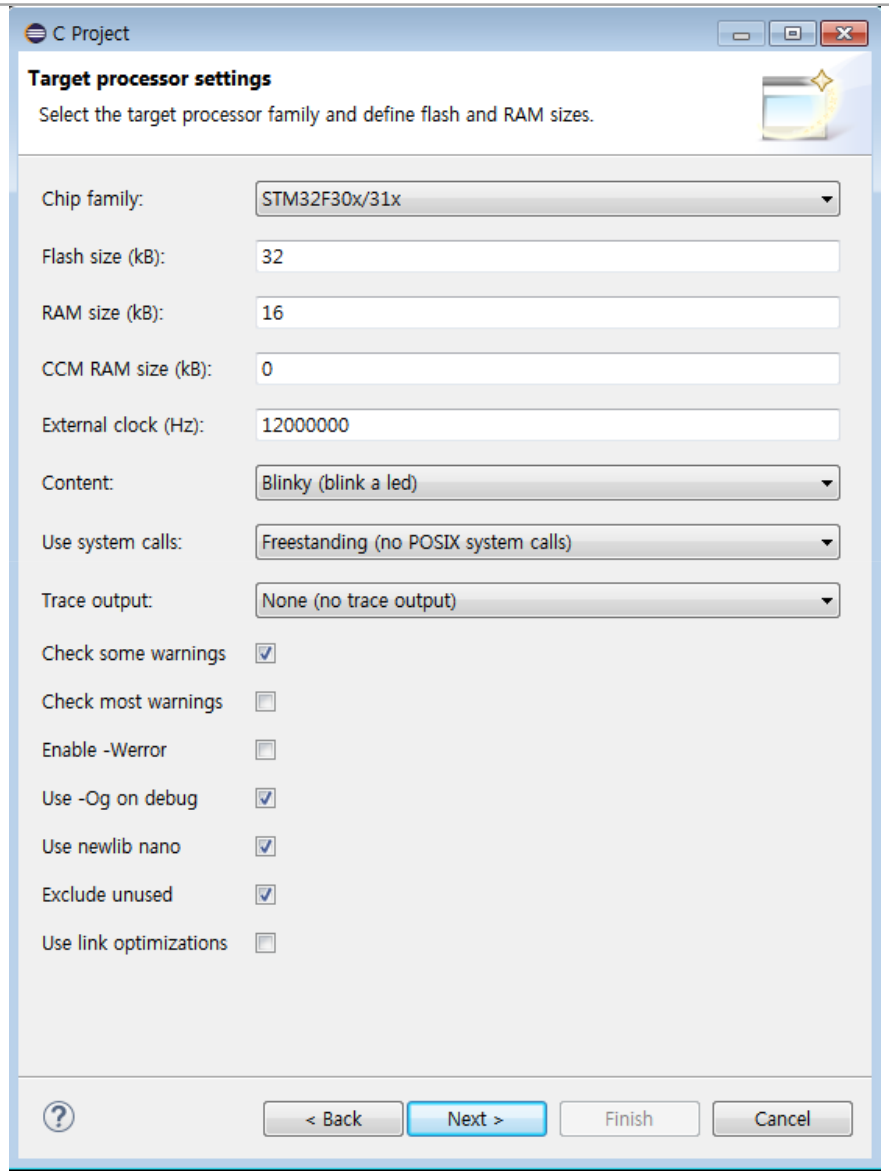
How to


sample_project - C/C++ - stm32f3xx_sample/src/main.c - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
New Alt+Shift+N
Open File...
Open Projects from File System...
Close Ctrl+W
Close All Ctrl+Shift+W
Save Ctrl+S
Save As...
Save All Ctrl+Shift+S
Revert
Move...
Rename... F2
Refresh F5
Convert Line Delimiters To
Print... Ctrl+P
Switch Workspace
Restart
Import...
Export...
Properties Alt+Enter
1 main.c [stm32f3xx_sample/src]
2 EE_usart.c [test1/src]
3 stm32f30x_it.c [test1/src]
4 stm32f30x_adc.c [test1/system/src/...]
Exit
Makefile Project with Existing Code
C++ Project
C Project
Project...
Convert to a C/C++ Autotools Project
Convert to a C/C++ Project (Adds C/C++ Nature)
Source Folder
Folder
Source File
Header File
File from Template
Class
Task
Other... Ctrl+N
In debug configurations, demonstrate how to print a gre
on the trace device. In release configurations the mess
simply discarded.
Then demonstrates how to blink a led with 1 Hz, using a
continuous loop and SysTick delays.
Trace support is enabled by adding the TRACE macro defi
By default the trace messages are forwarded to the NONE
Tasks Console Properties
Console [test1]
: Cross ARM GNU Print Size
-eabi-size --format=berkeley "test1.elf"
data bss dec hex filename

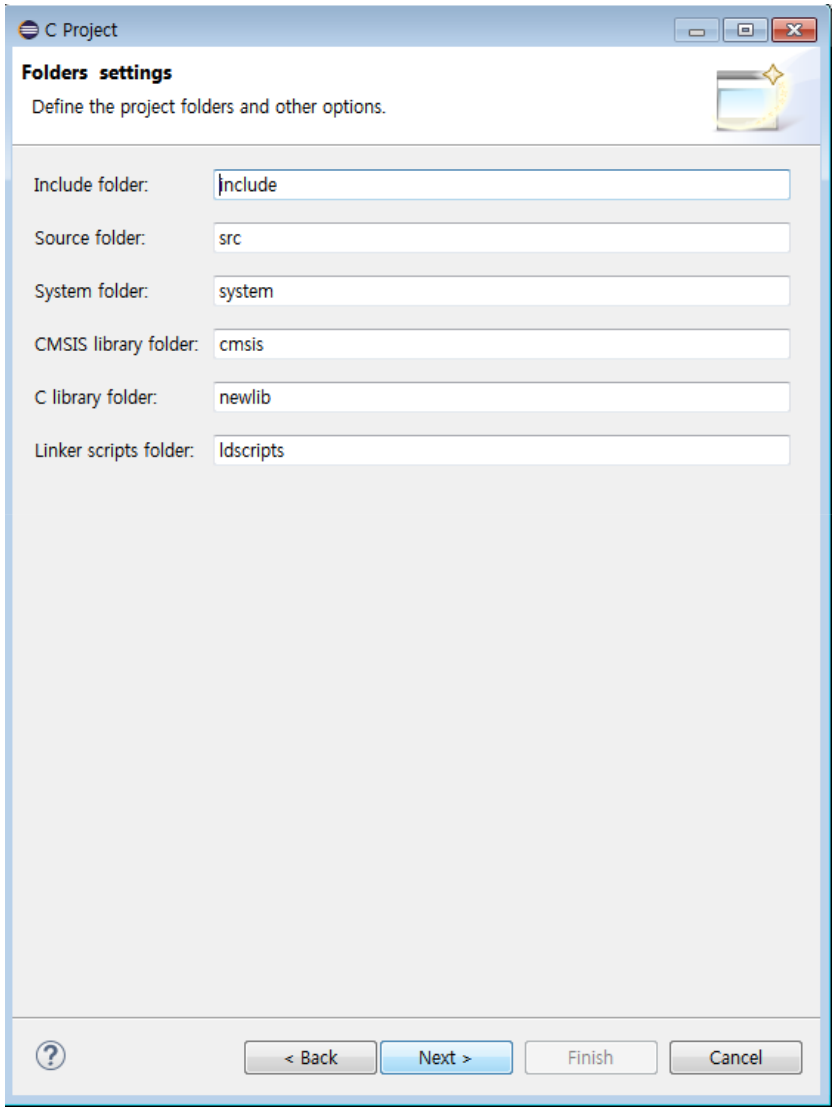
How to


C Project
C Project
Create C project of selected type
Project name: stm32f3xx_sample
Use default location
Location: D:₩project_test₩st₩stmf301₩sample_project₩stm32f3xx_sample
Browse...
Choose file system: default
Project type:
Toolchains:
Executable
Empty Project
Hello World ANSI C Project
Hello World ARM C Project
ADuCM36x C/C++ Project
Hello World ARM Cortex-M C/C++
Freescale Kinetis KLxx C/C++ Proje
Freescale Processor Expert C/C++ F
STM32F0xx C/C++ Project
STM32F10x C/C++ Project
STM32F2xx C/C++ Project
STM32F3xx C/C++ Project
STM32F4xx C/C++ Project
STM32F7xx C/C++ Project
Shared Library
Static Library
Makefile project
GNU Autotools
Cross ARM GCC
Show project types and toolchains only if they are supported on the platform
< Back
Next >
Finish
Cancel

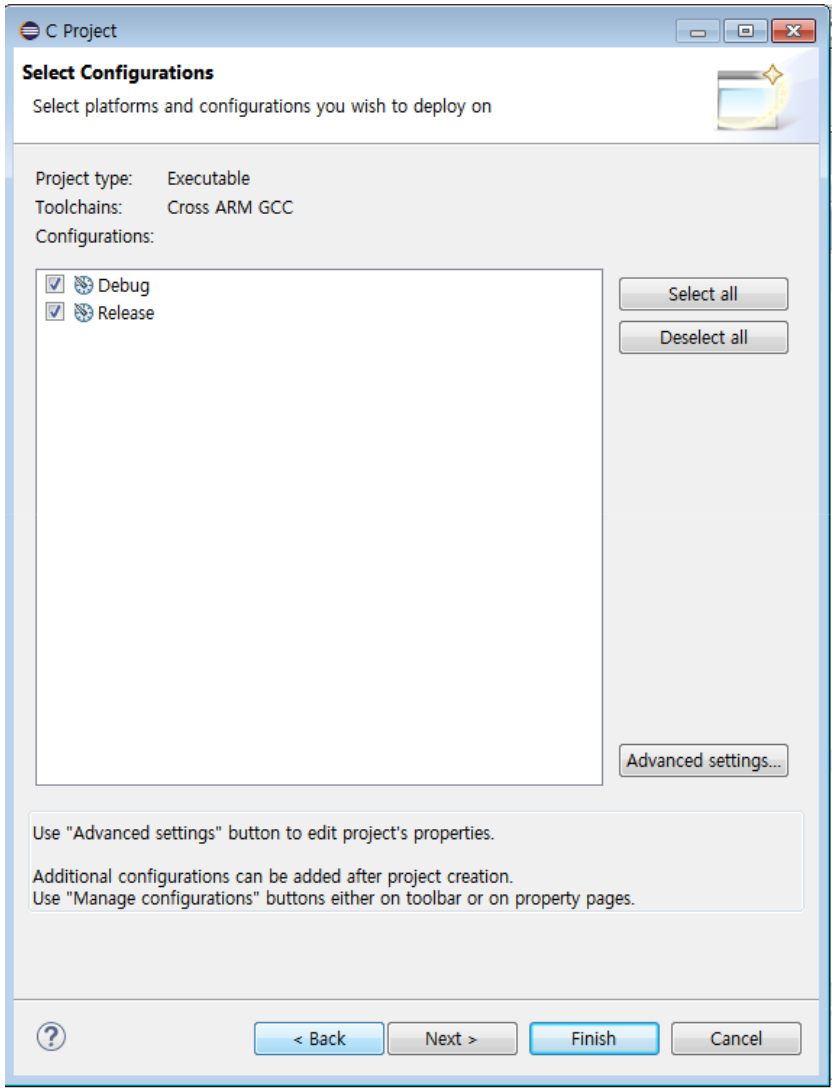
How to


C Project
Target processor settings
Select the target processor family and define flash and RAM sizes.
Chip family:
STM32F30x/31x
Flash size (kB):
32
RAM size (kB):
16
CCM RAM size (kB):
0
External clock (Hz):
12000000
Content:
Blinky (blink a led)
Use system calls:
Freestanding (no POSIX system calls)
Trace output:
None (no trace output)
Check some warnings
Check most warnings
Enable -Werror
Use -Og on debug
Use newlib nano
Exclude unused
Use link optimizations
< Back
Next >
Finish
Cancel

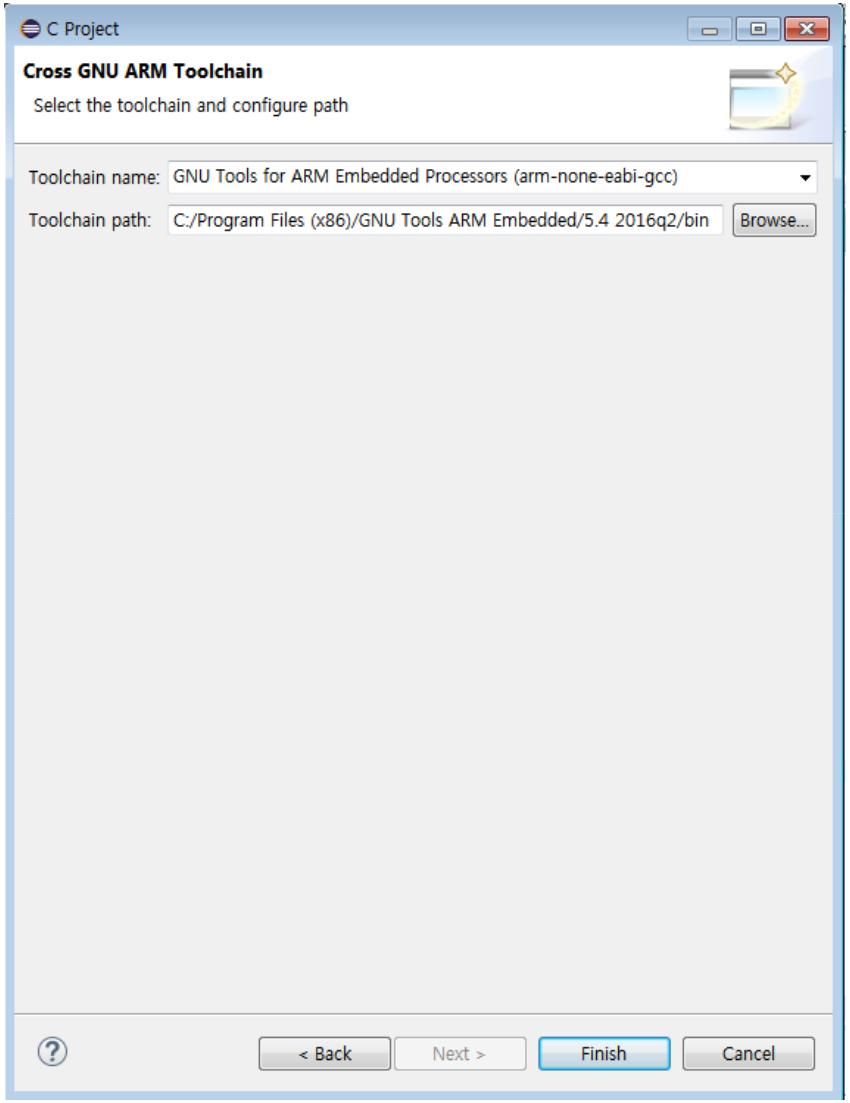
How to


C Project
Folders settings
Define the project folders and other options.
Include folder:
include
Source folder:
src
System folder:
system
CMSIS library folder:
cmsis
C library folder:
newlib
Linker scripts folder:
ldscripts
< Back
Next >
Finish
Cancel

How to


C Project
Select Configurations
Select platforms and configurations you wish to deploy on
Project type: Executable
Toolchains: Cross ARM GCC
Configurations:
Debug
Release
Select all
Deselect all
Advanced settings...
Use "Advanced settings" button to edit project's properties.
Additional configurations can be added after project creation.
Use "Manage configurations" buttons either on toolbar or on property pages.
< Back
Next >
Finish
Cancel

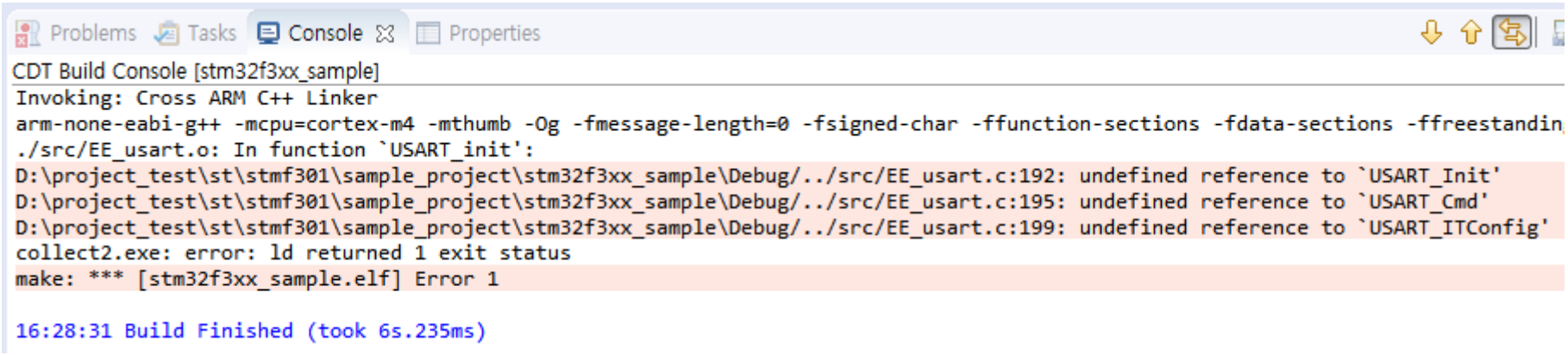
How to


C Project
Cross GNU ARM Toolchain
Select the toolchain and configure path
Toolchain name:
GNU Tools for ARM Embedded Processors (arm-none-eabi-gcc)
Toolchain path:
C:/Program Files (x86)/GNU Tools ARM Embedded/5.4 2016q2/bin
Browse...
< Back
Next >
Finish
Cancel

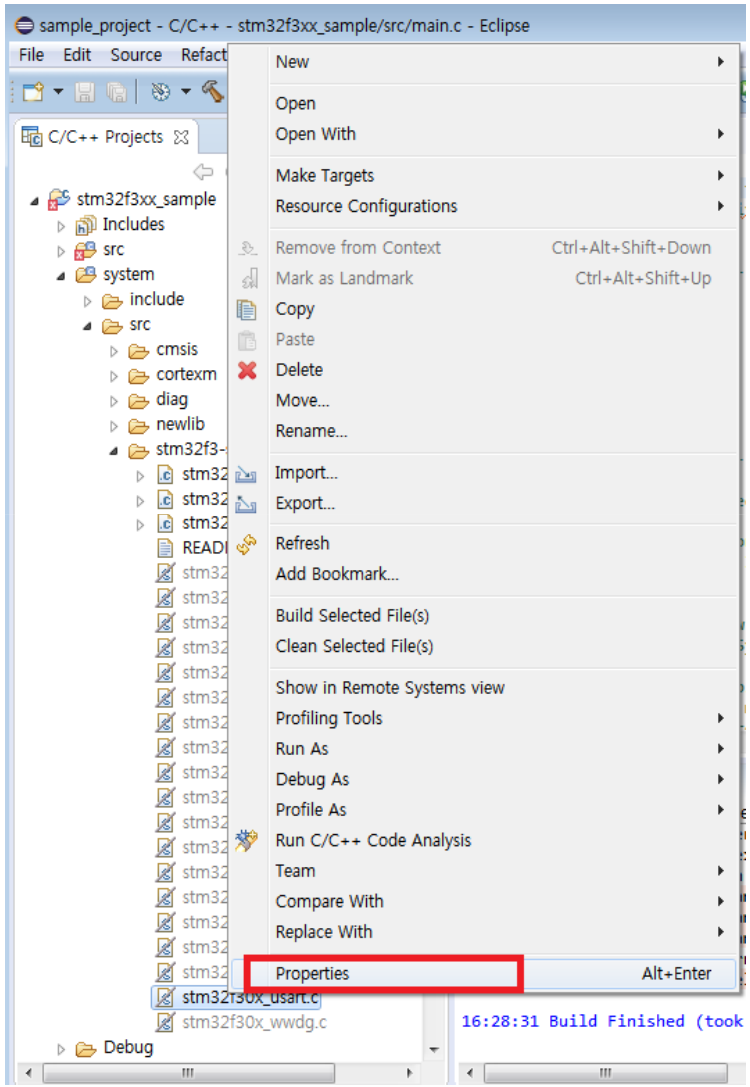
Etc.

Error building cross compile

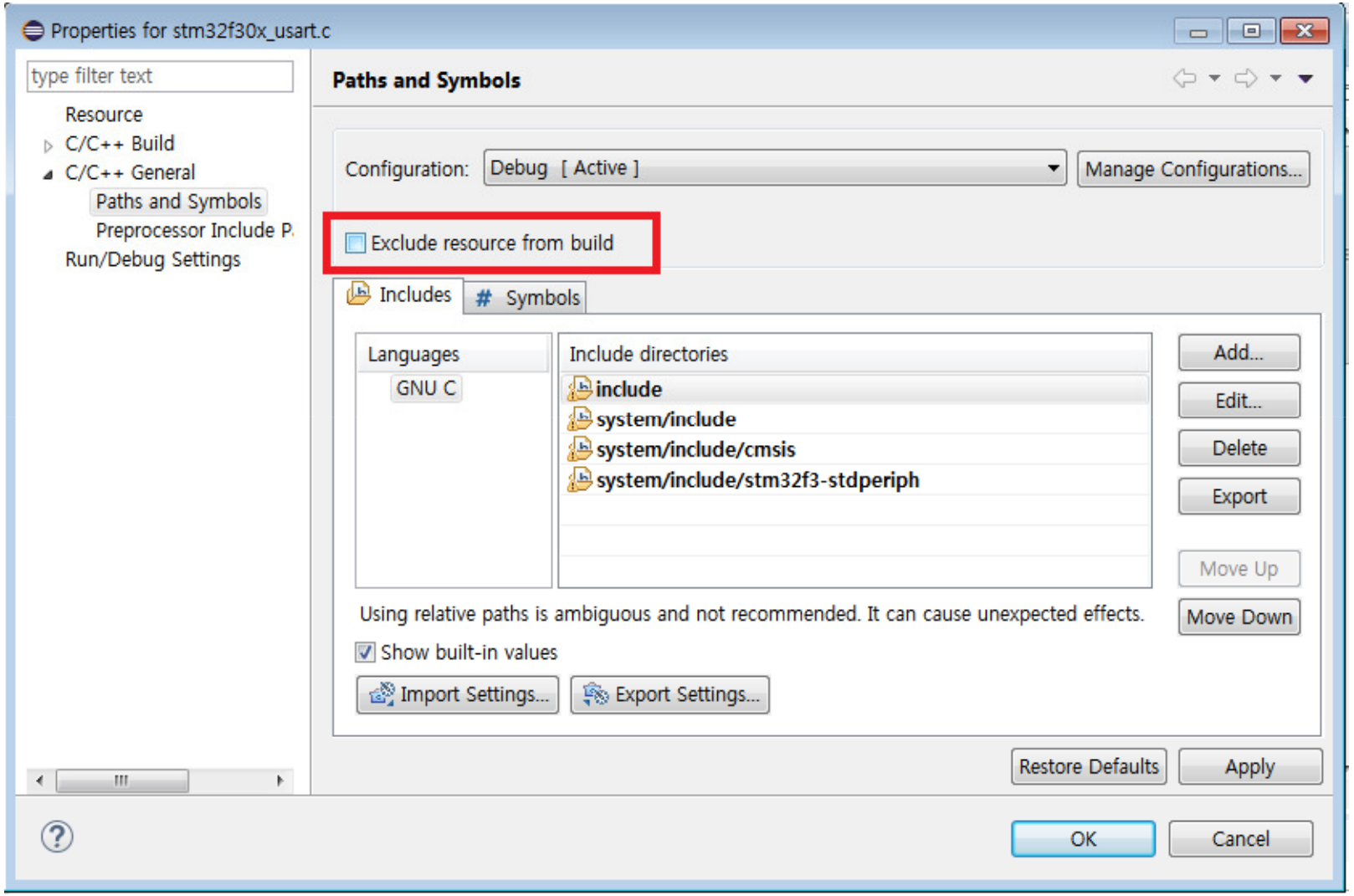
- STM32 library undefined reference



Etc.

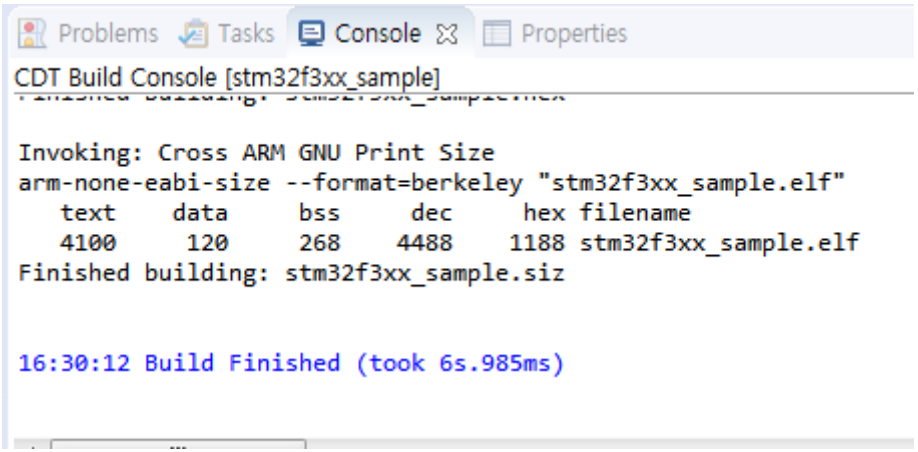

sample_project - C/C++ - stm32f3xx_sample/src/main.c - Eclipse
File Edit Source Refact
C/C++ Projects
stm32f3xx_sample
Includes
src
system
include
src
cmsis
cortexm
diag
newlib
stm32f3-
READ
stm32f30x_usart.c
stm32f30x_wwdg.c
Debug
New
Open
Open With
Make Targets
Resource Configurations
Remove from Context Ctrl+Alt+Shift+Down
Mark as Landmark Ctrl+Alt+Shift+Up
Copy
Paste
Delete
Move...
Rename...
Import...
Export...
Refresh
Add Bookmark...
Build Selected File(s)
Clean Selected File(s)
Show in Remote Systems view
Profiling Tools
Run As
Debug As
Profile As
Run C/C++ Code Analysis
Team
Compare With
Replace With
Properties Alt+Enter
16:28:31 Build Finished (took

Etc.


Properties for stm32f30x_usart.c
type filter text
Resource
C/C++ Build
C/C++ General
Paths and Symbols
Preprocessor Include P.
Run/Debug Settings
Paths and Symbols
Configuration: Debug [Active]
Manage Configurations...
Exclude resource from build
Includes
Symbols
Languages
GNU C
Include directories
include
system/include
system/include/cmsis
system/include/stm32f3-stdperiph
Add...
Edit...
Delete
Export
Move Up
Move Down
Using relative paths is ambiguous and not recommended. It can cause unexpected effects.
Show built-in values
Import Settings...
Export Settings...
Restore Defaults
Apply
OK
Cancel

Etc.

Build


Problems
Tasks
Console
Properties
CDT Build Console [stm32f3xx_sample]
Invoking: Cross ARM GNU Print Size
arm-none-eabi-size --format=berkeley "stm32f3xx_sample.elf"
text data bss dec hex filename
4100 120 268 4488 1188 stm32f3xx_sample.elf
Finished building: stm32f3xx_sample.siz
16:30:12 Build Finished (took 6s.985ms)