Principles and Practices of Microcontroller (Embedded System Design I) -Software and tool chain

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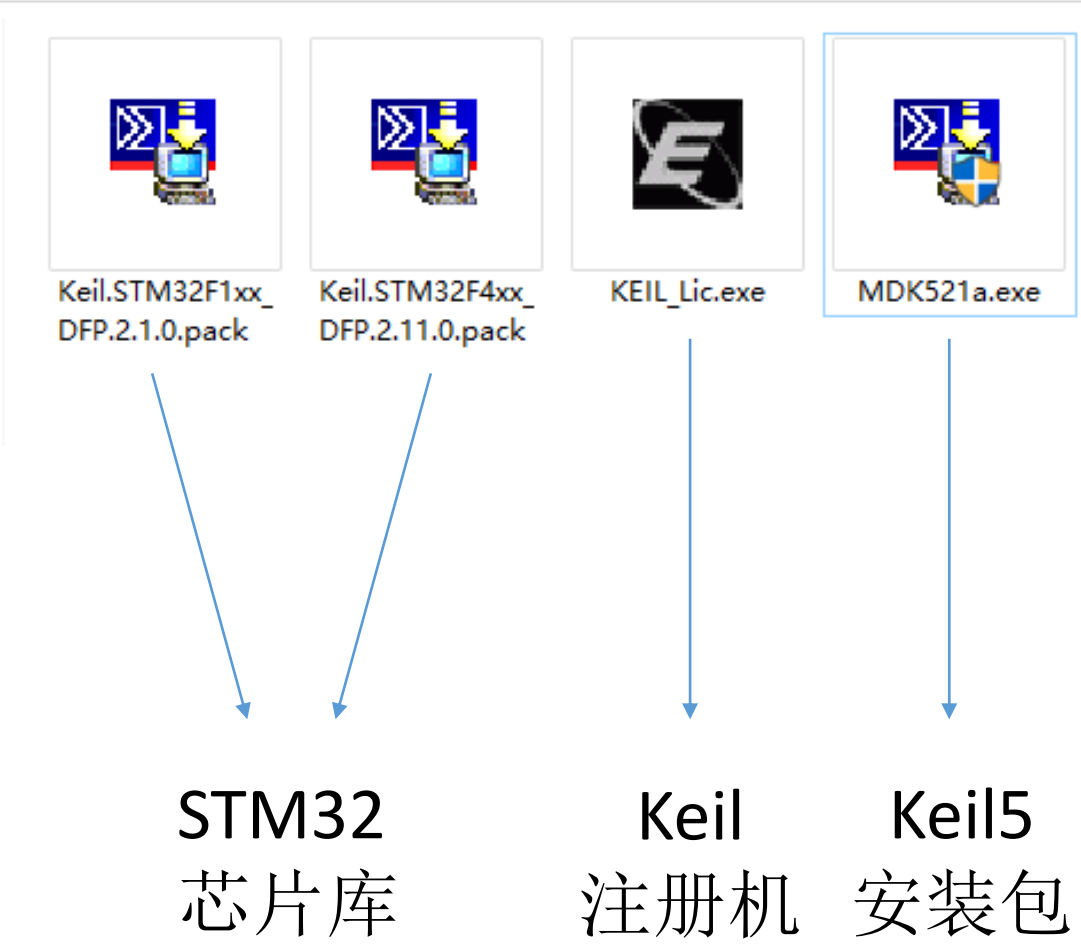
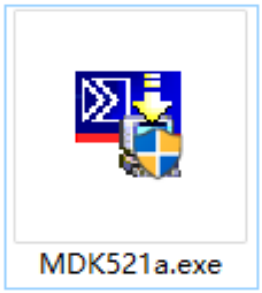
Keil5的安装

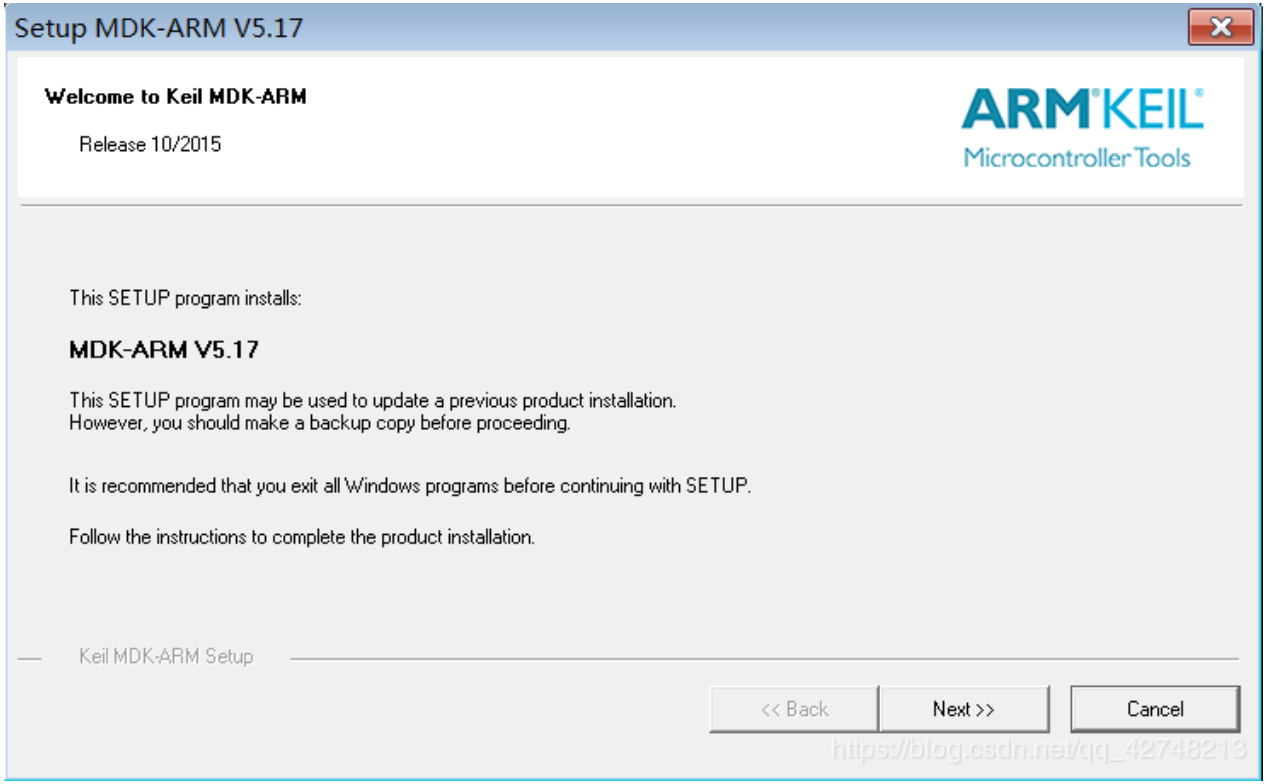
- **STM32F103C8T6_EXAMPLE**



Keil5的安装

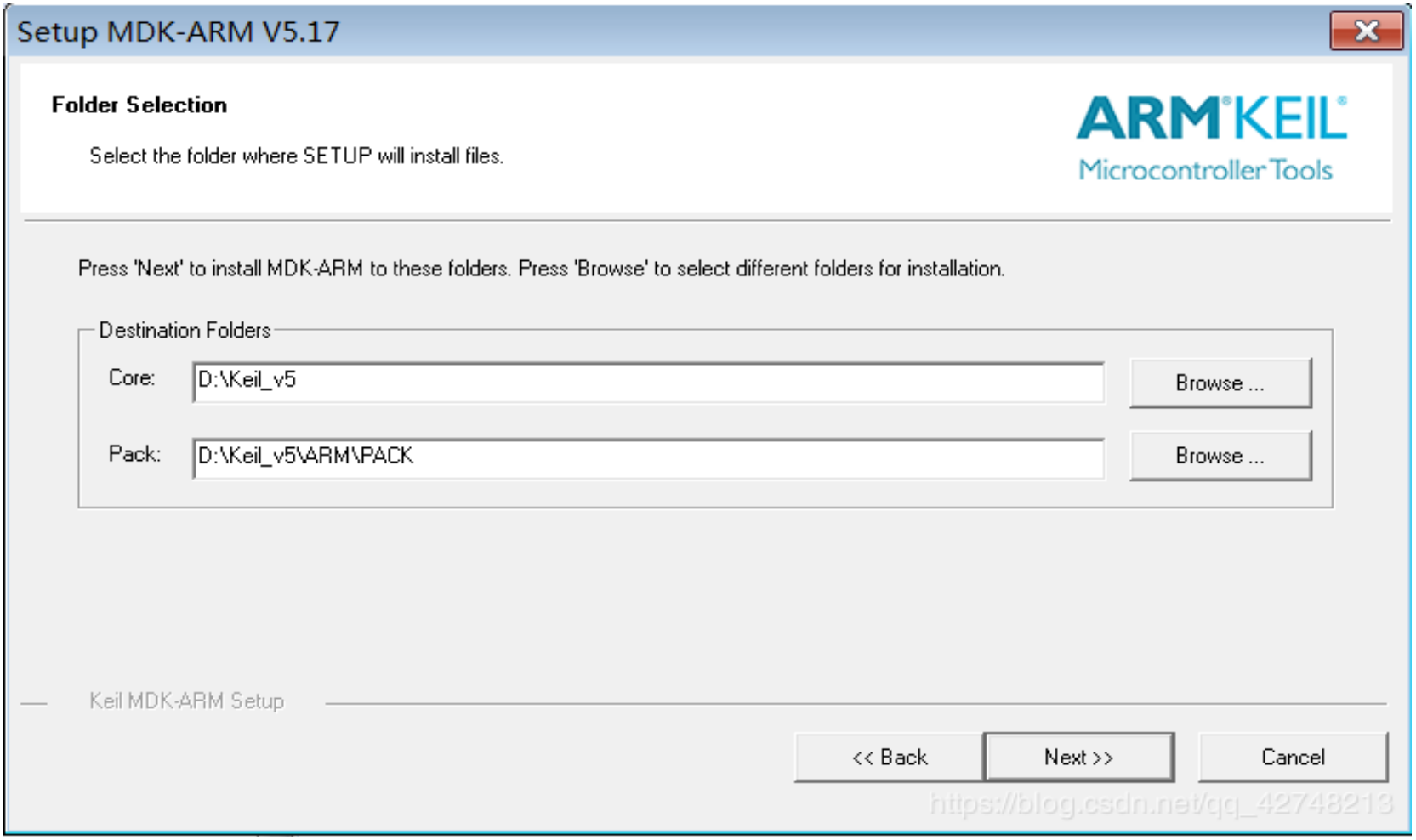


双击安装文件



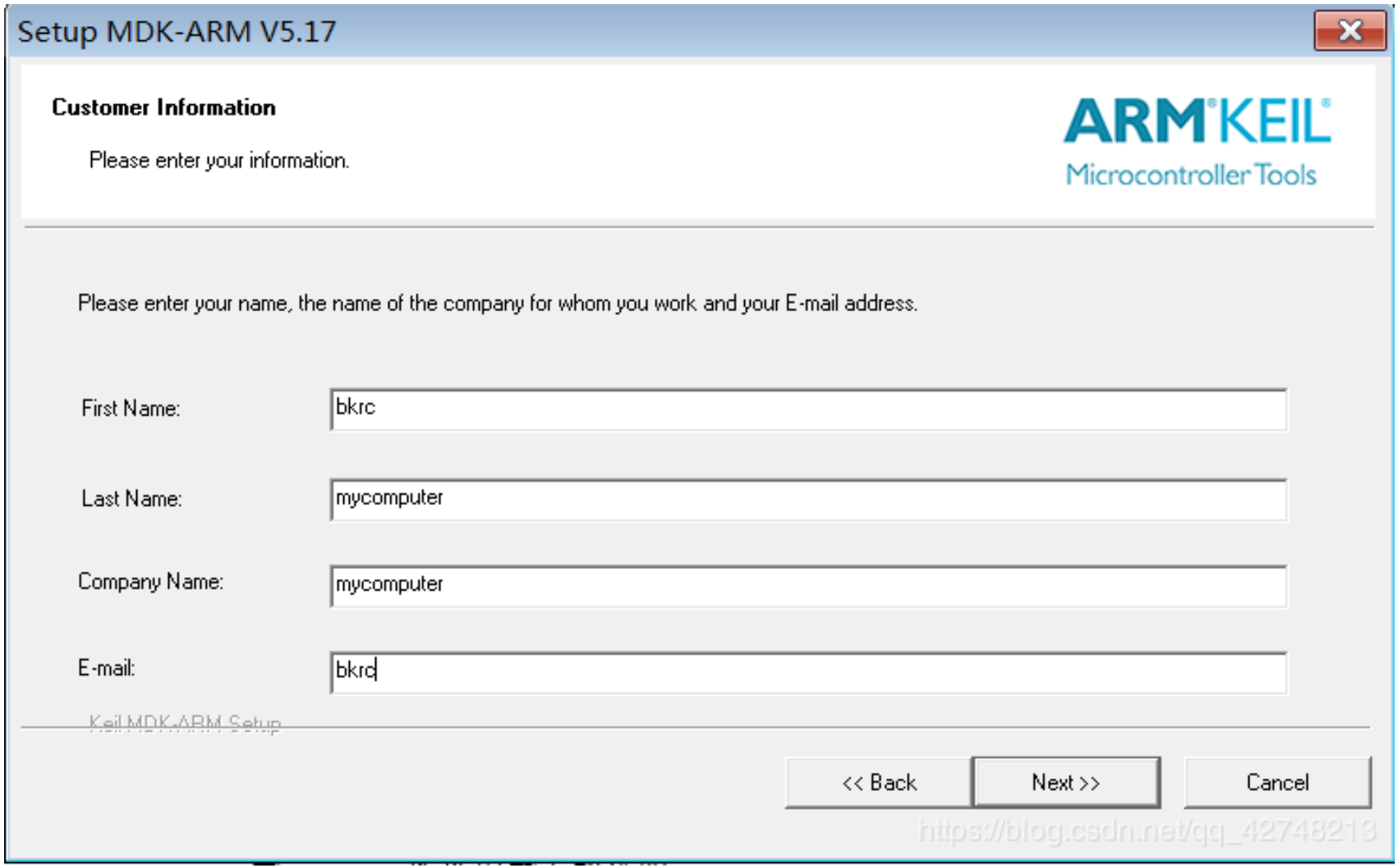
Keil5的安装

路径选择



Keil5的安装

邮箱、用户名等任意填写



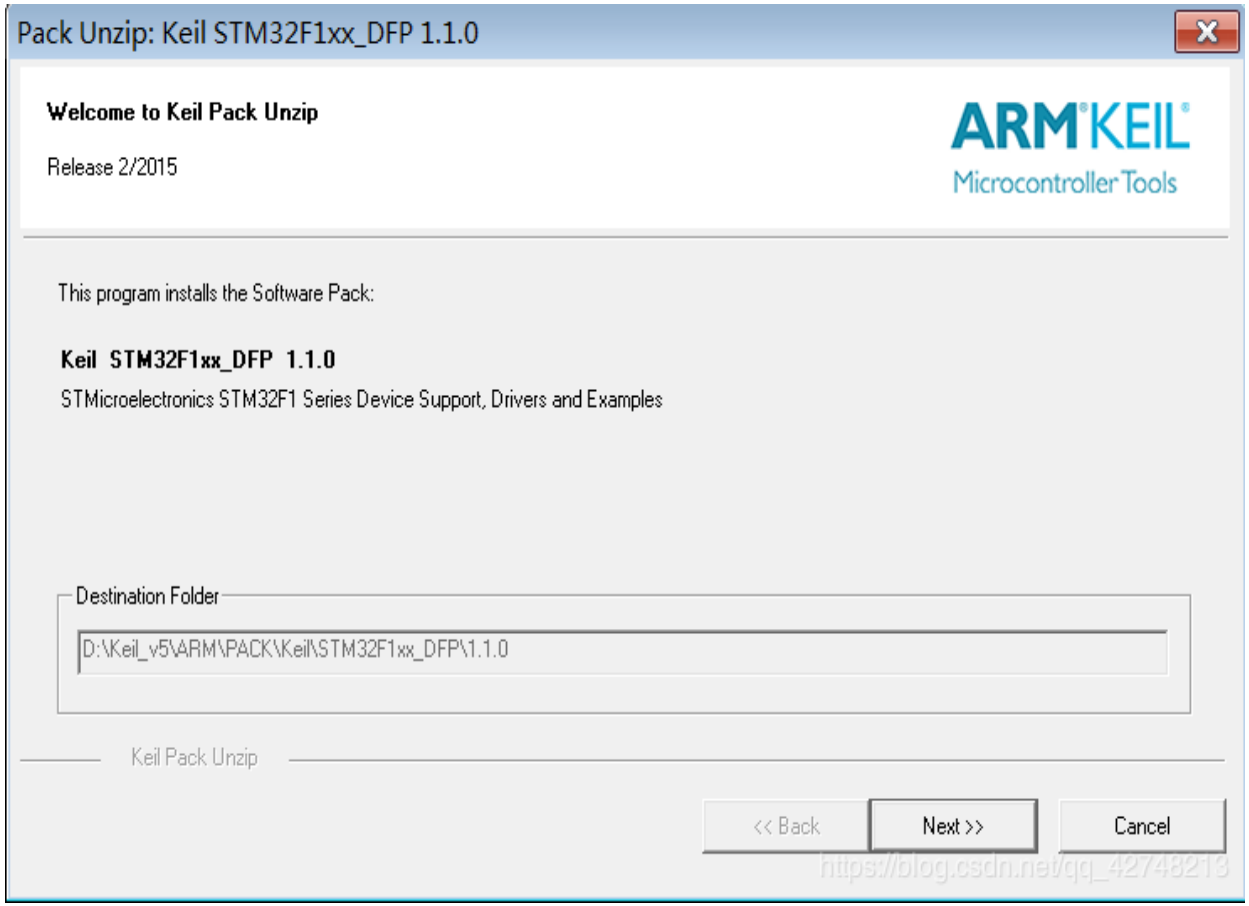
器件库的安装

- https://www.stmicroelectronics.com.cn/zh/embedded-software/stm32-standard-peripheral-libraries.html

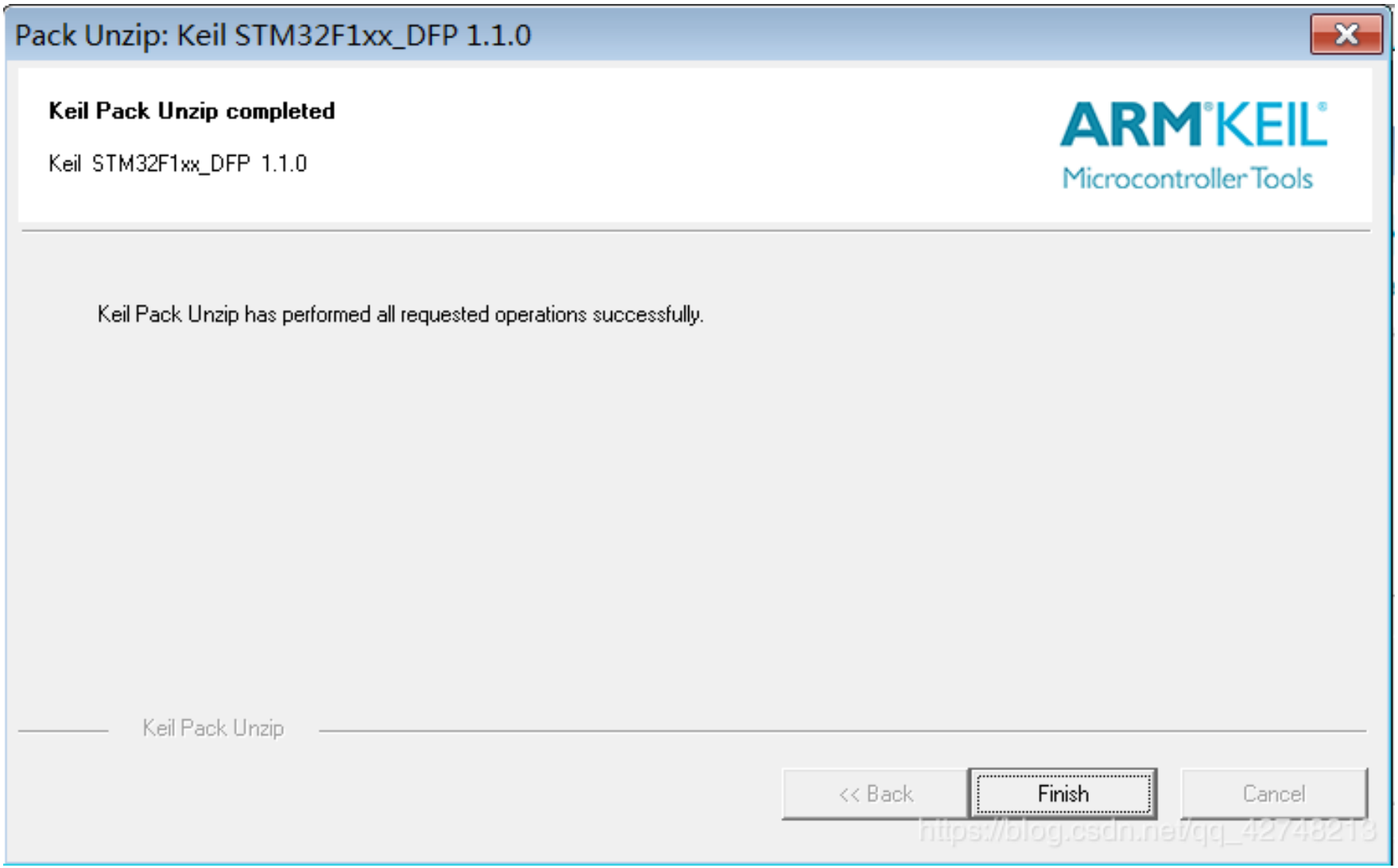
器件库的安装

Keil.STM32F1xx_
DFP.2.1.0.pack

双击安装文件



器件库的安装



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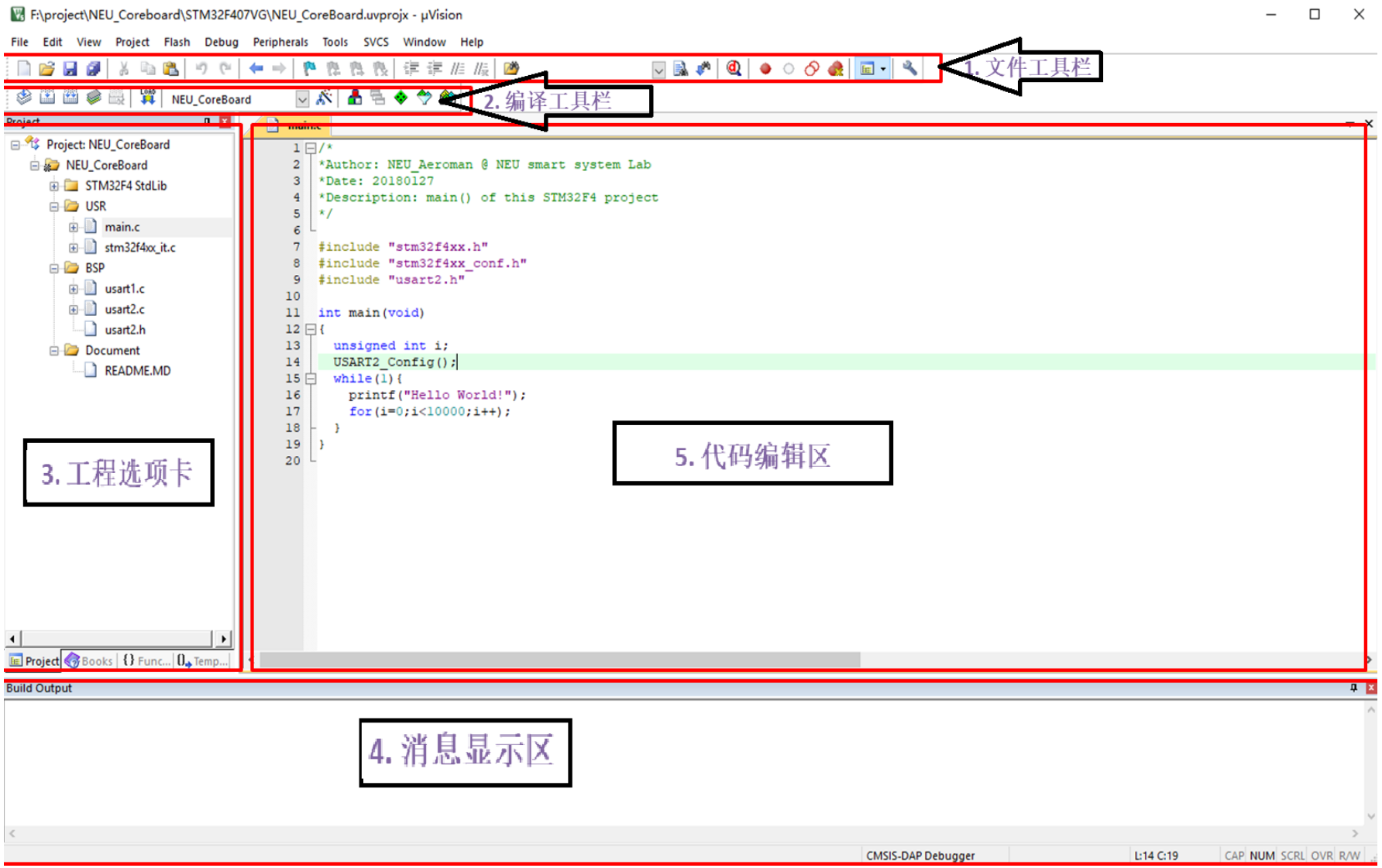
F:\project\NEU_Coreboard\STM32F407VG\NEU_CoreBoard.uvprojx - µVision
File Edit View Project Flash Debug Peripherals Tools SVCS Window Help
NEU_CoreBoard
1. 文件工具栏
2. 编译工具栏
Project: NEU_CoreBoard
NEU_CoreBoard
STM32F4 StdLib
USR
main.c
stm32f4xx_it.c
BSP
usart1.c
usart2.c
usart2.h
Document
README.MD
3. 工程选项卡
/*
*Author: NEU_Aeroman @ NEU smart system Lab
*Date: 20180127
*Description: main() of this STM32F4 project
*/
#include "stm32f4xx.h"
#include "stm32f4xx_conf.h"
#include "usart2.h"
int main(void)
{
unsigned int i;
USART2_Config();
while(1){
printf("Hello World!");
for(i=0;i<10000;i++);
}
}
5. 代码编辑区
Build Output
4. 消息显示区
CMSIS-DAP Debugger
L:14 C:19
CAP NUM SCRL OVR R/W

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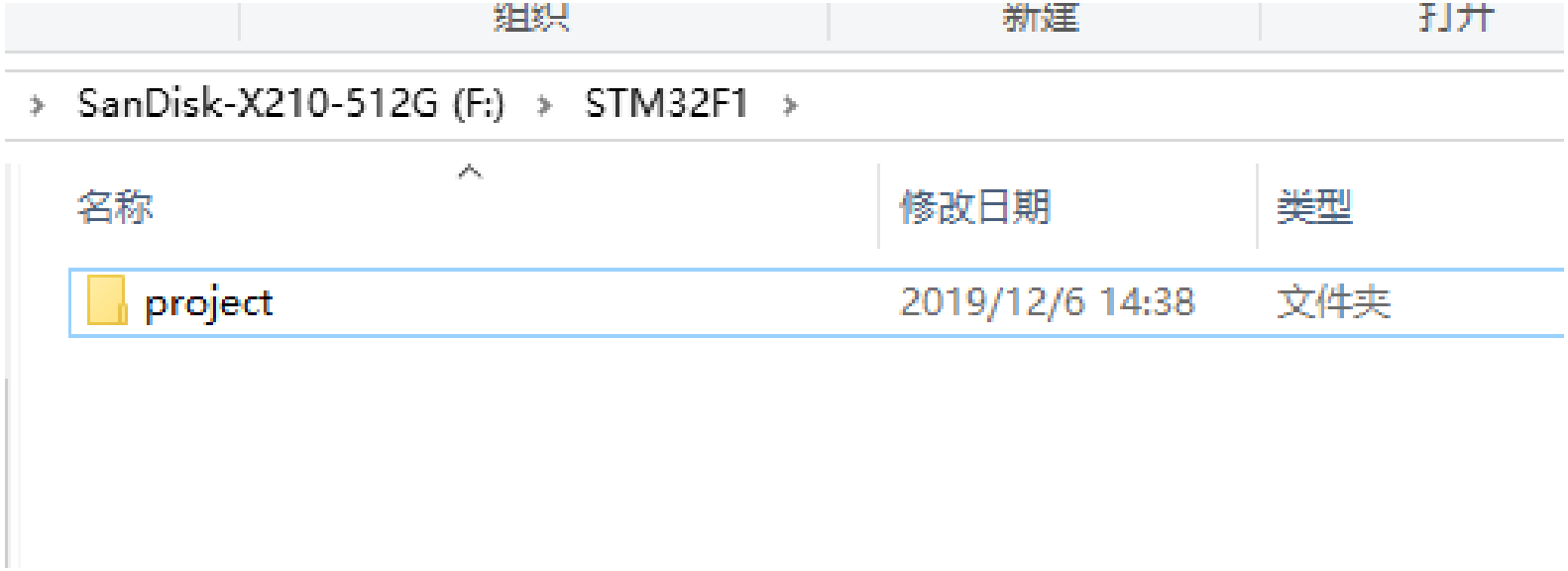
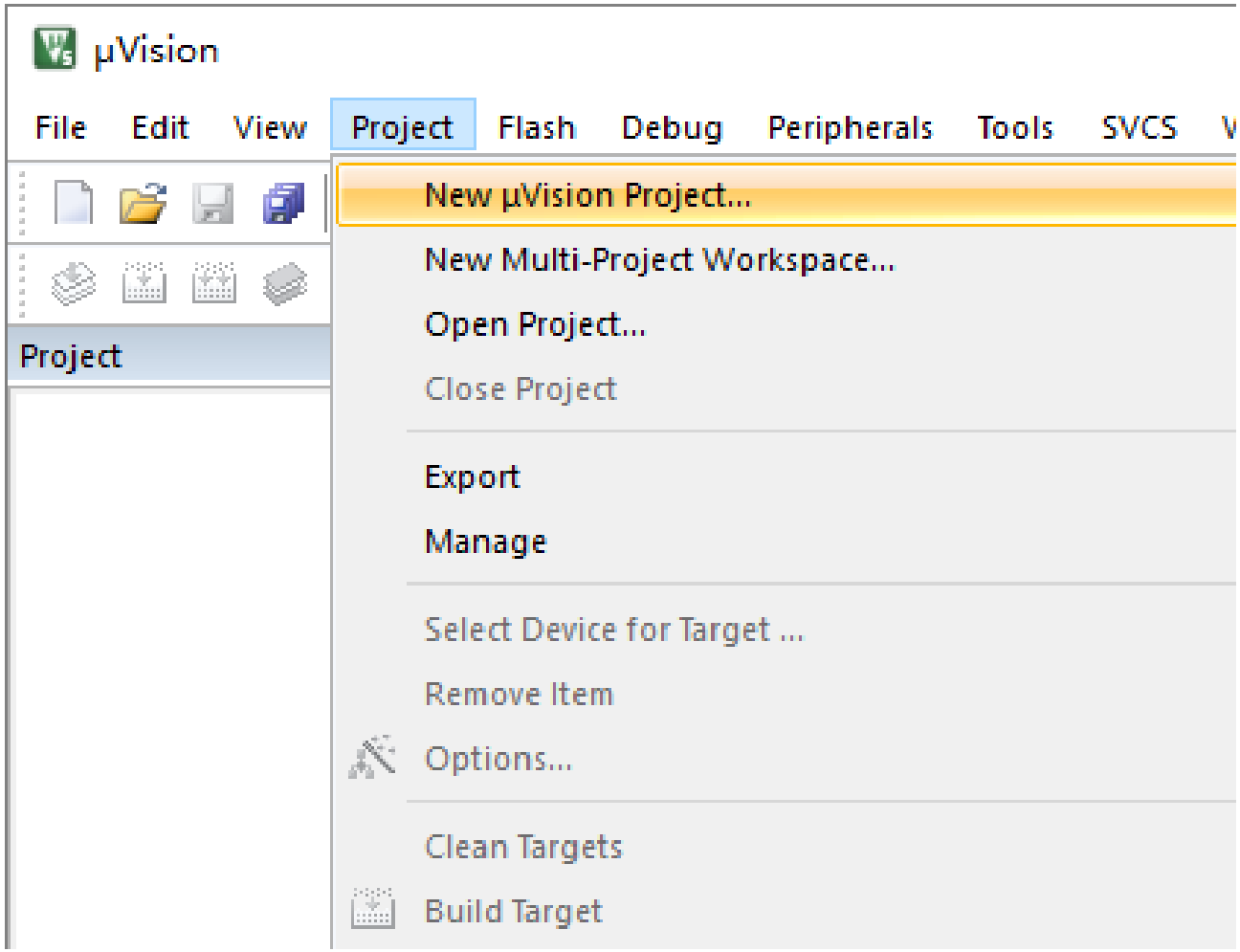
新建工程之前，创建一个文件夹，如**STM32F1**，并在该文件夹下创建**project**文件夹。
（选择路径时不要包含中文或者其他特殊字符）



Keil5使用教程

- 新建工程，在project子文件夹下保存。



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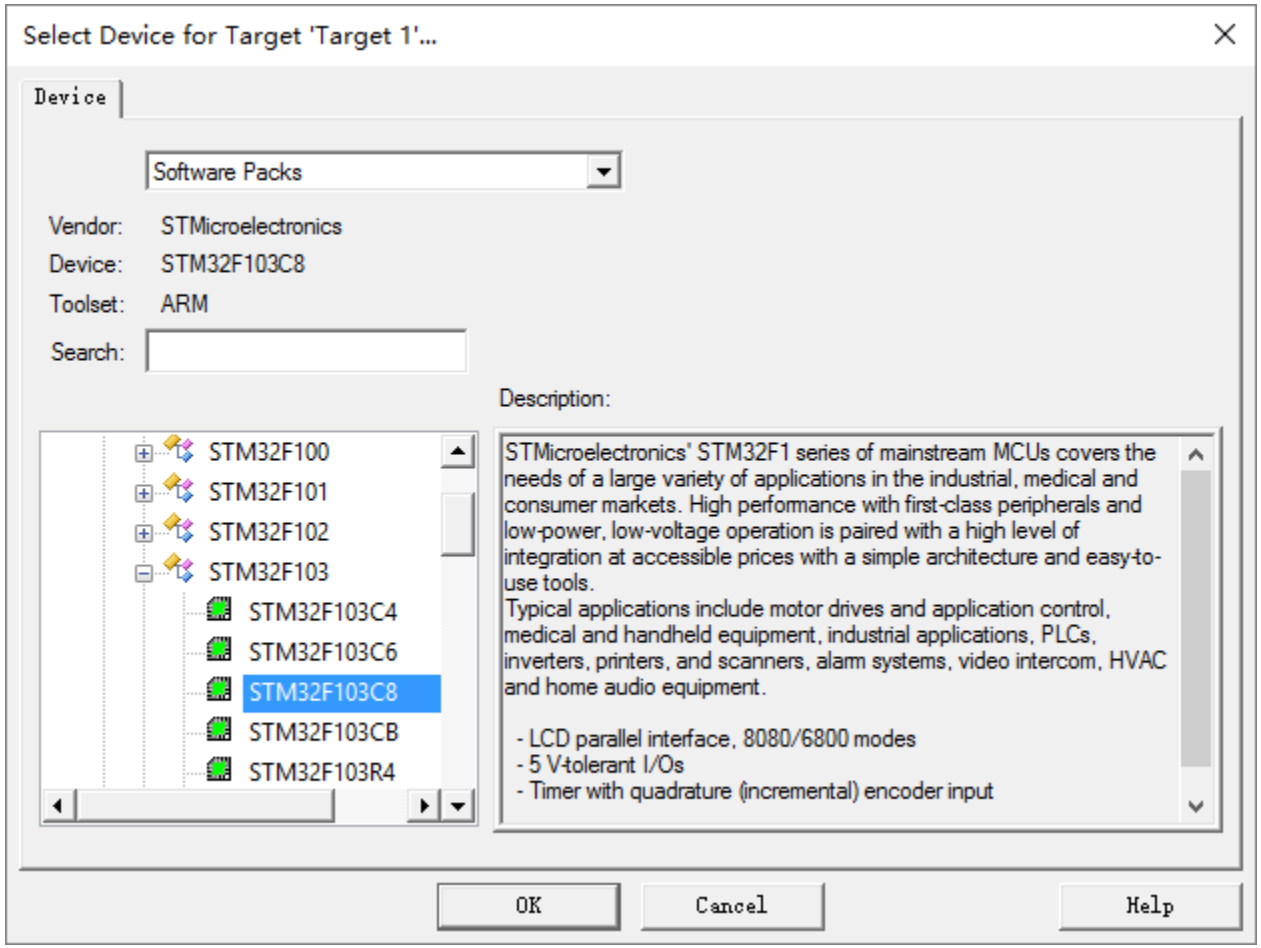
- 选择设备（**STM32F103C8**）



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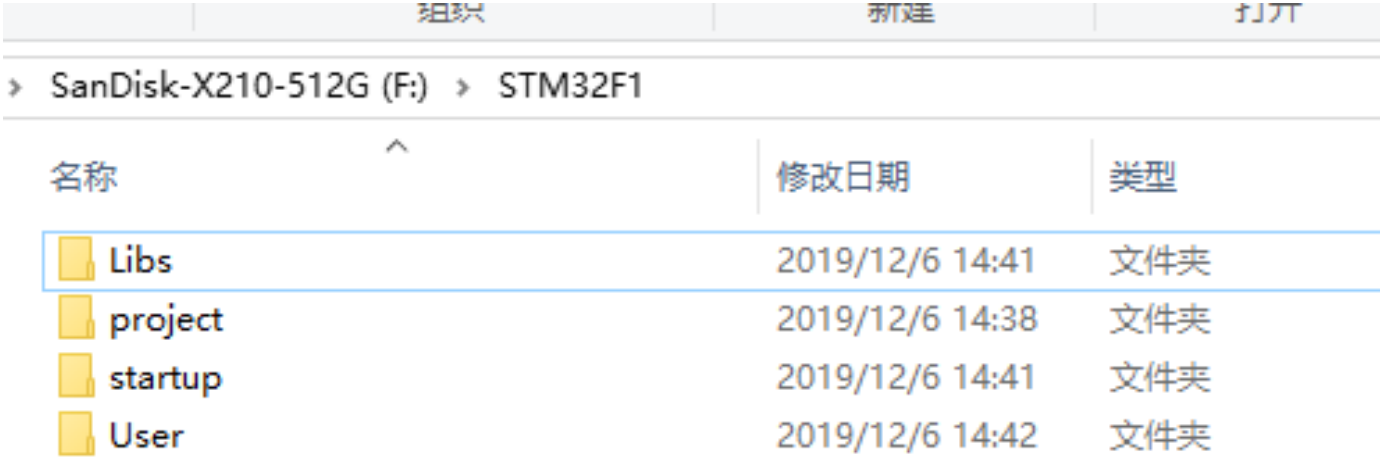
- 创建完成后，
- 在路径下新建三个文件夹：
- **User（存放用户常用文件）**
- **Libs（存放库文件）**
- **Startup（存放启动文件）**



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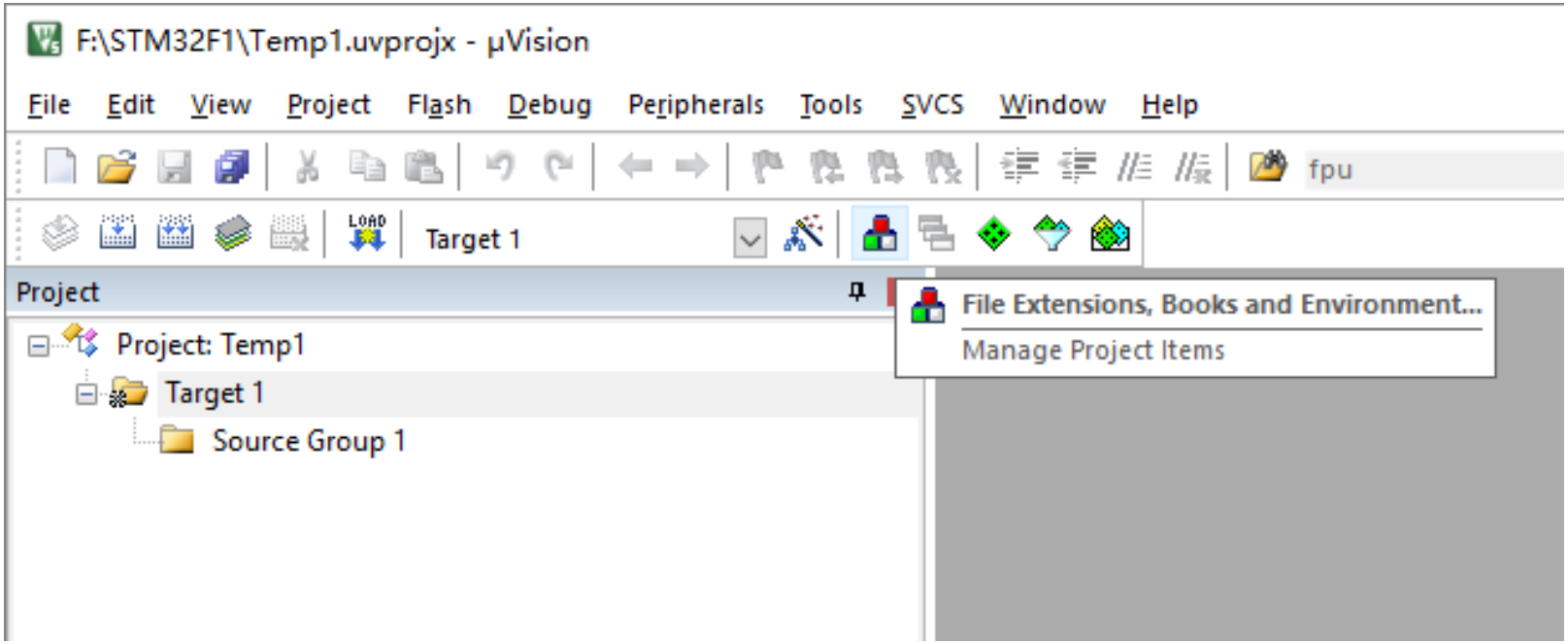
F:\STM32F1\Temp1.uvprojx - µVision
File Edit View Project Flash Debug Peripherals Tools SVCS Window Help
fpu
Target 1
Project
Project: Temp1
Target 1
Source Group 1
File Extensions, Books and Environment...
Manage Project Items

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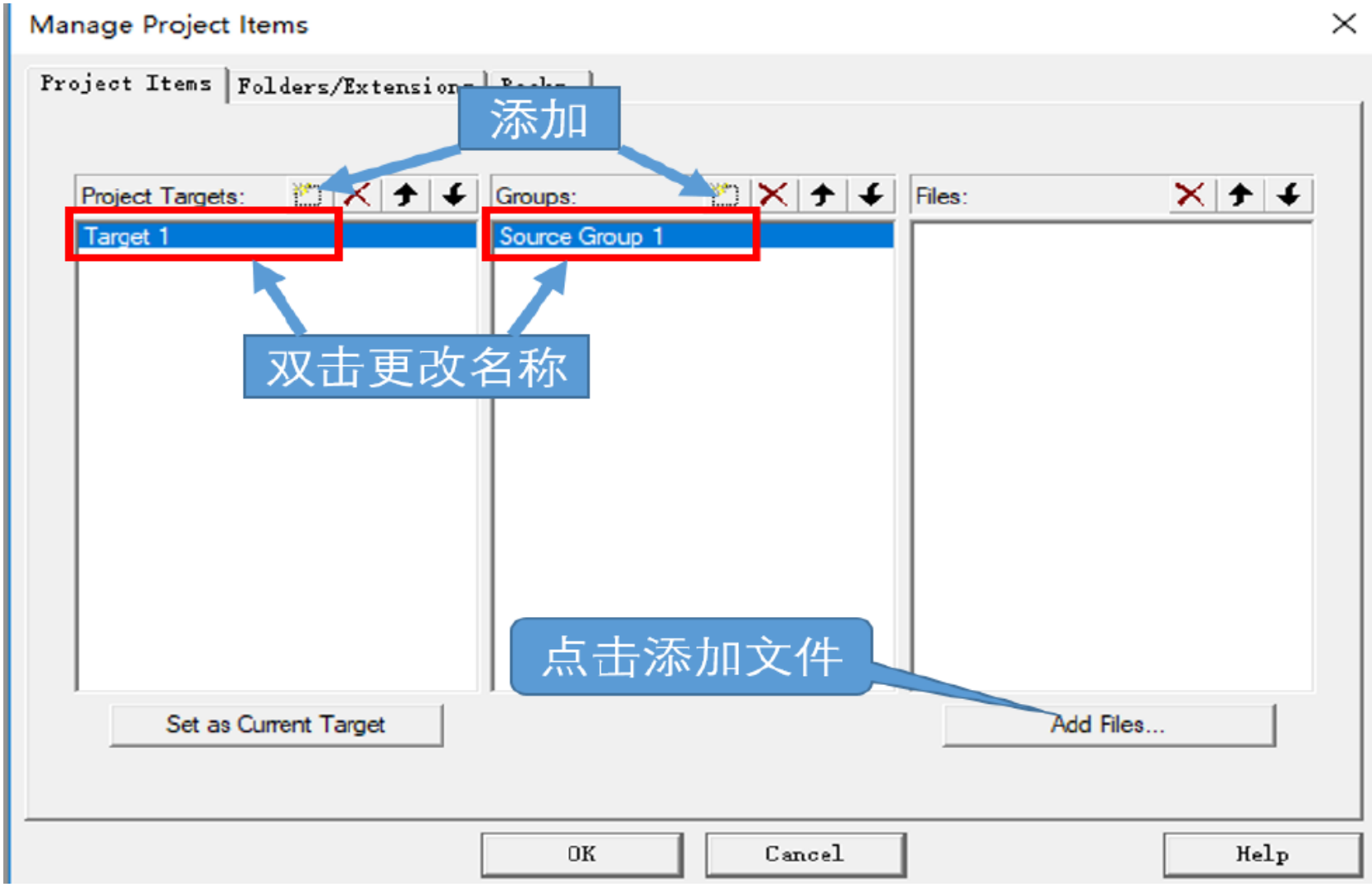
Manage Project Items
Project Items
Folders/Extensions
添加
Project Targets:
Groups:
Files:
Target 1
Source Group 1
双击更改名称
点击添加文件
Set as Current Target
Add Files...
OK
Cancel
Help

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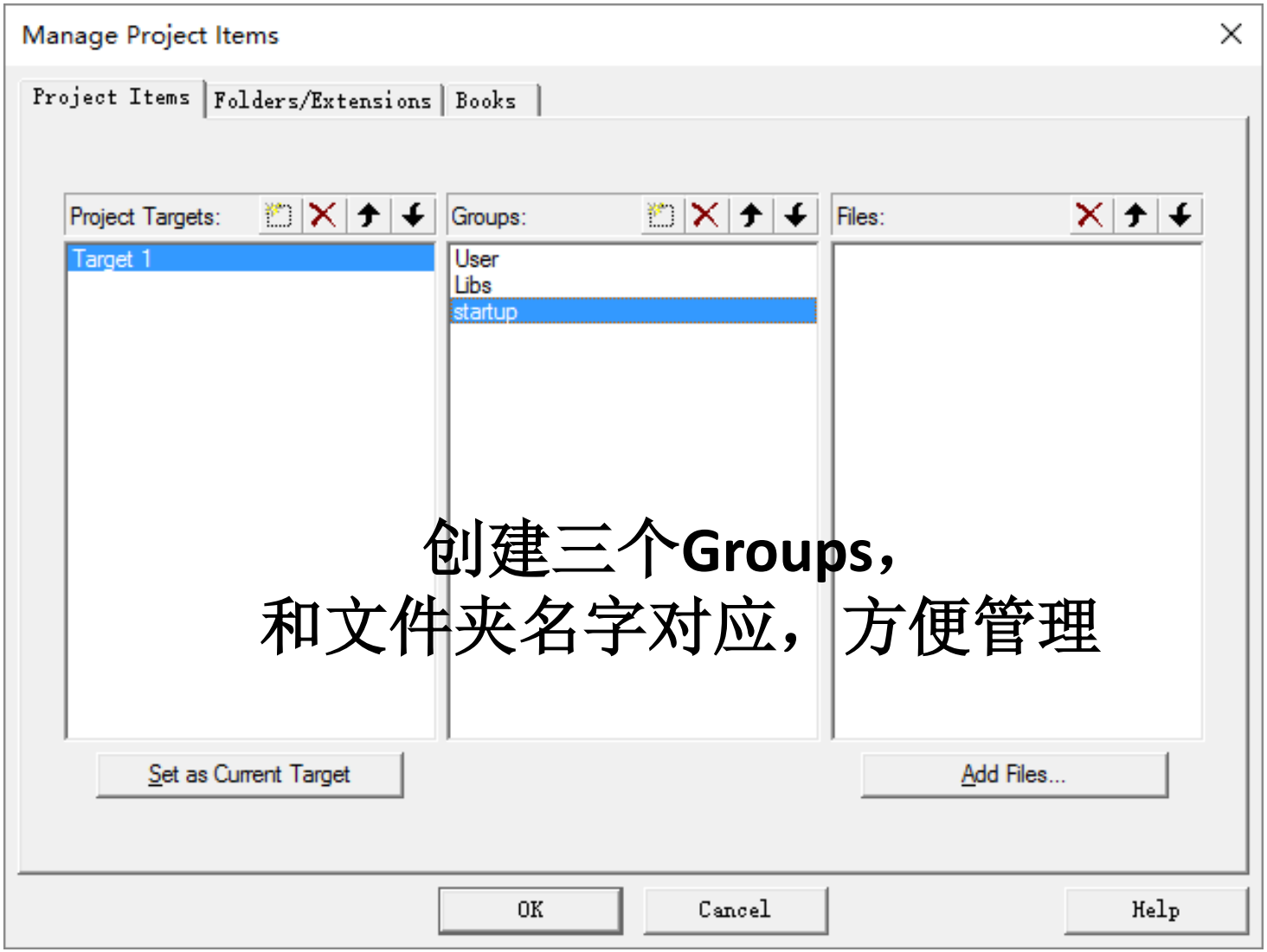

创建三个Groups，
和文件夹名字对应，方便管理

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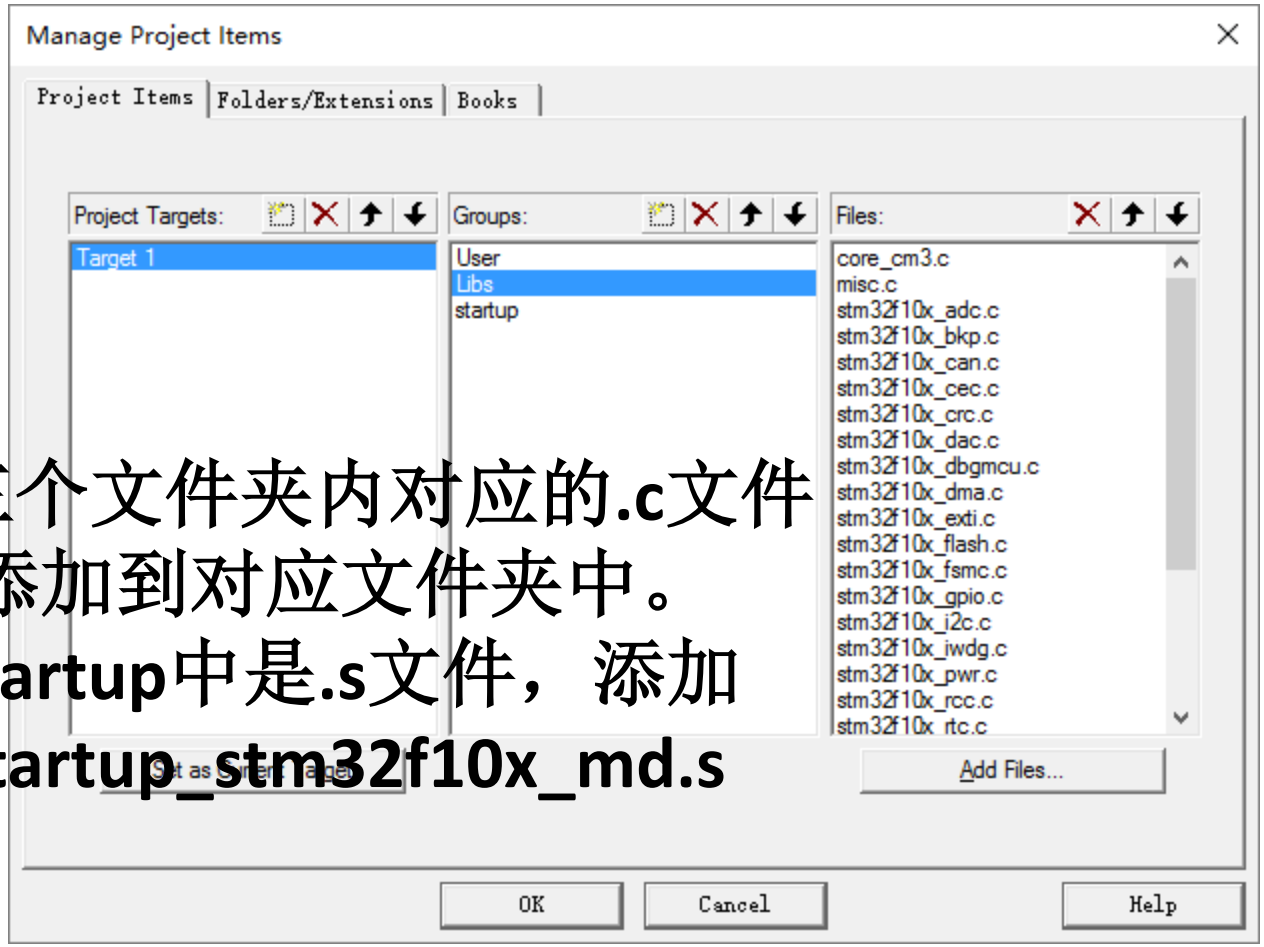

把三个文件夹内对应的.c文件添加到对应文件夹中。

Startup中是.s文件，添加startup_stm32f10x_md.s

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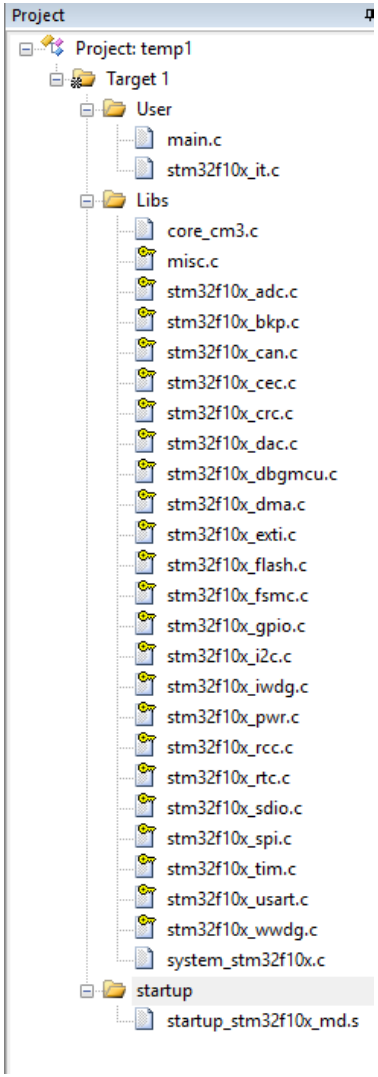

可以在左侧**Project**栏中，
看到已经添加的文件。

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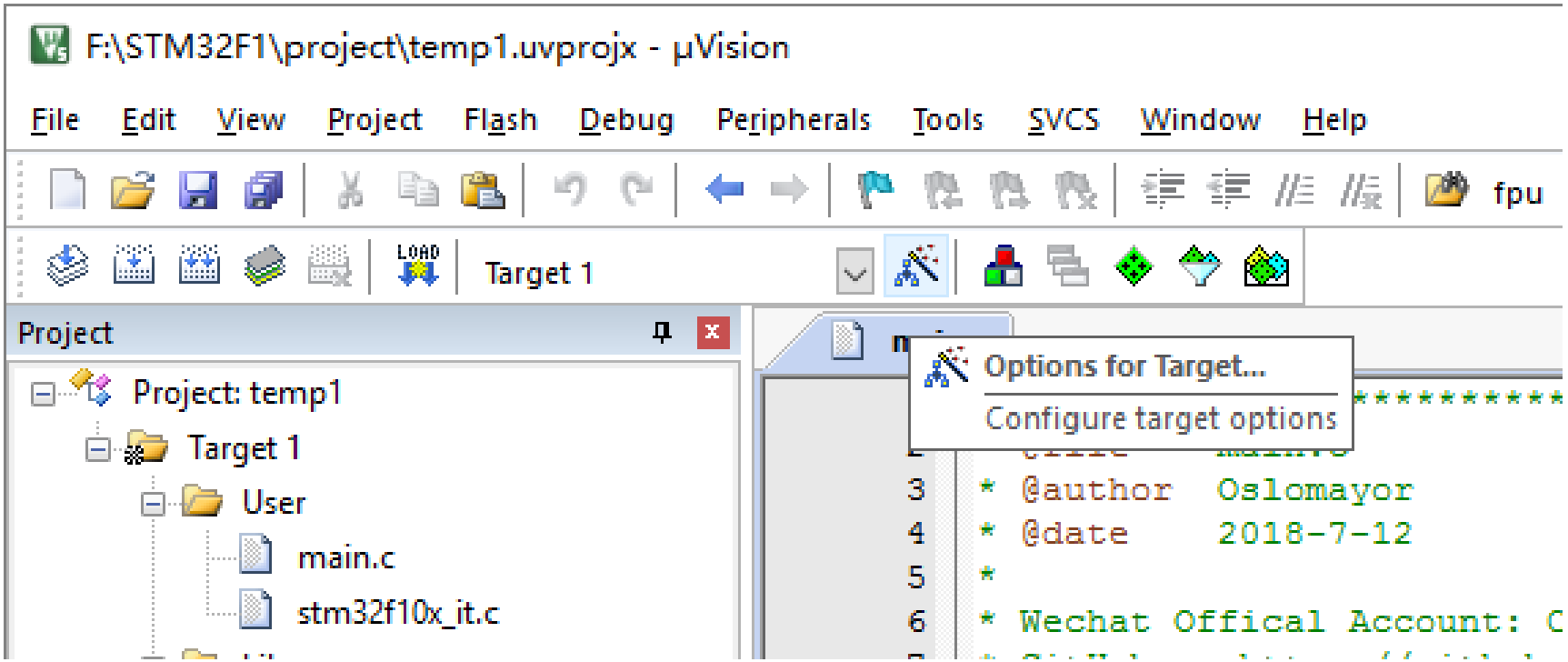
F:\STM32F1\project\temp1.uvprojx - µVision
File Edit View Project Flash Debug Peripherals Tools SVCS Window Help
fpu
Target 1
Project
Project: temp1
Target 1
User
main.c
stm32f10x_it.c
Options for Target...
Configure target options
* @author Oslomayor
* @date 2018-7-12
* Wechat Offical Account: C

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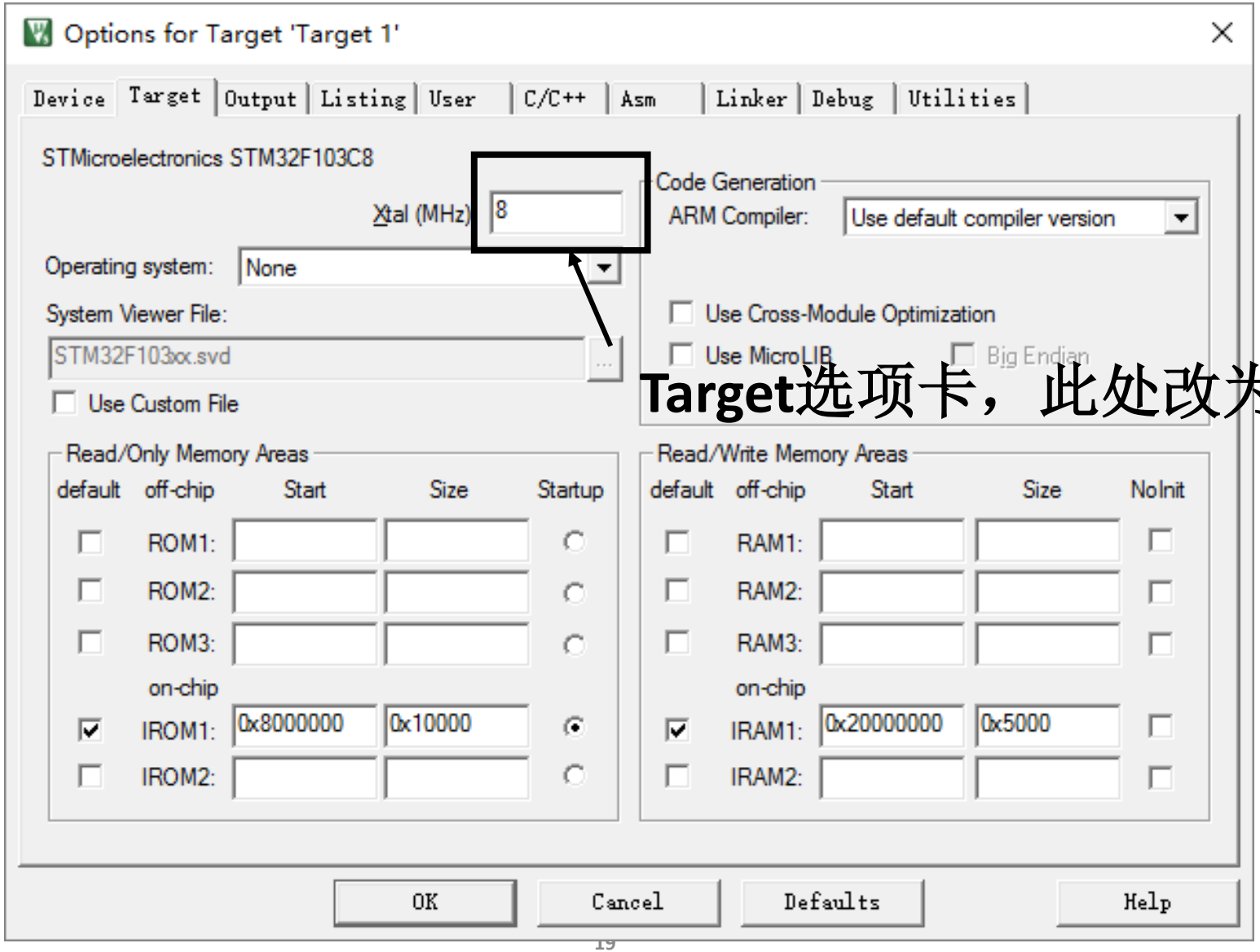
Options for Target 'Target 1'
Device
Target
Output
Listing
User
C/C++
Asm
Linker
Debug
Utilities
STMicroelectronics STM32F103C8
Xtal (MHz)
8
Code Generation
ARM Compiler:
Use default compiler version
Operating system:
None
System Viewer File:
STM32F103xx.svd
Use Cross-Module Optimization
Use MicroLIB
Big Endian
Use Custom File
Target选项卡，此处改为8
Read/Only Memory Areas
default
off-chip
Start
Size
Startup
ROM1:
ROM2:
ROM3:
on-chip
IROM1:
0x8000000
0x10000
IROM2:
Read/Write Memory Areas
default
off-chip
Start
Size
NoInit
RAM1:
RAM2:
RAM3:
on-chip
IRAM1:
0x20000000
0x5000
IRAM2:
OK
Cancel
Defaults
Help

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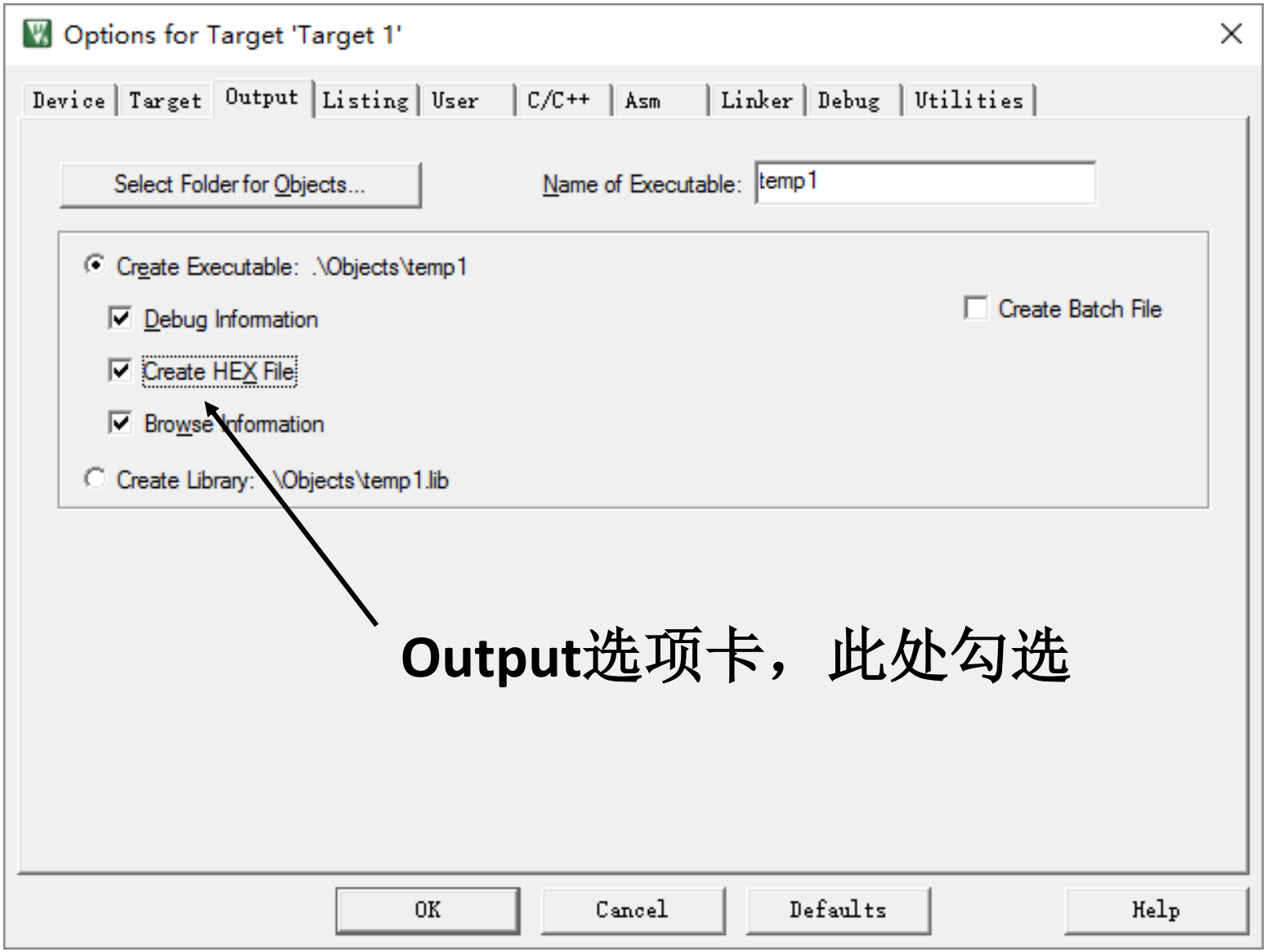
Options for Target 'Target 1'
Device
Target
Output
Listing
User
C/C++
Asm
Linker
Debug
Utilities
Select Folder for Objects...
Name of Executable: temp1
Create Executable: .\Objects\temp1
Debug Information
Create HEX File
Browse Information
Create Library: .\Objects\temp1.lib
Create Batch File
OK
Cancel
Defaults
Help
Output选项卡，此处勾选

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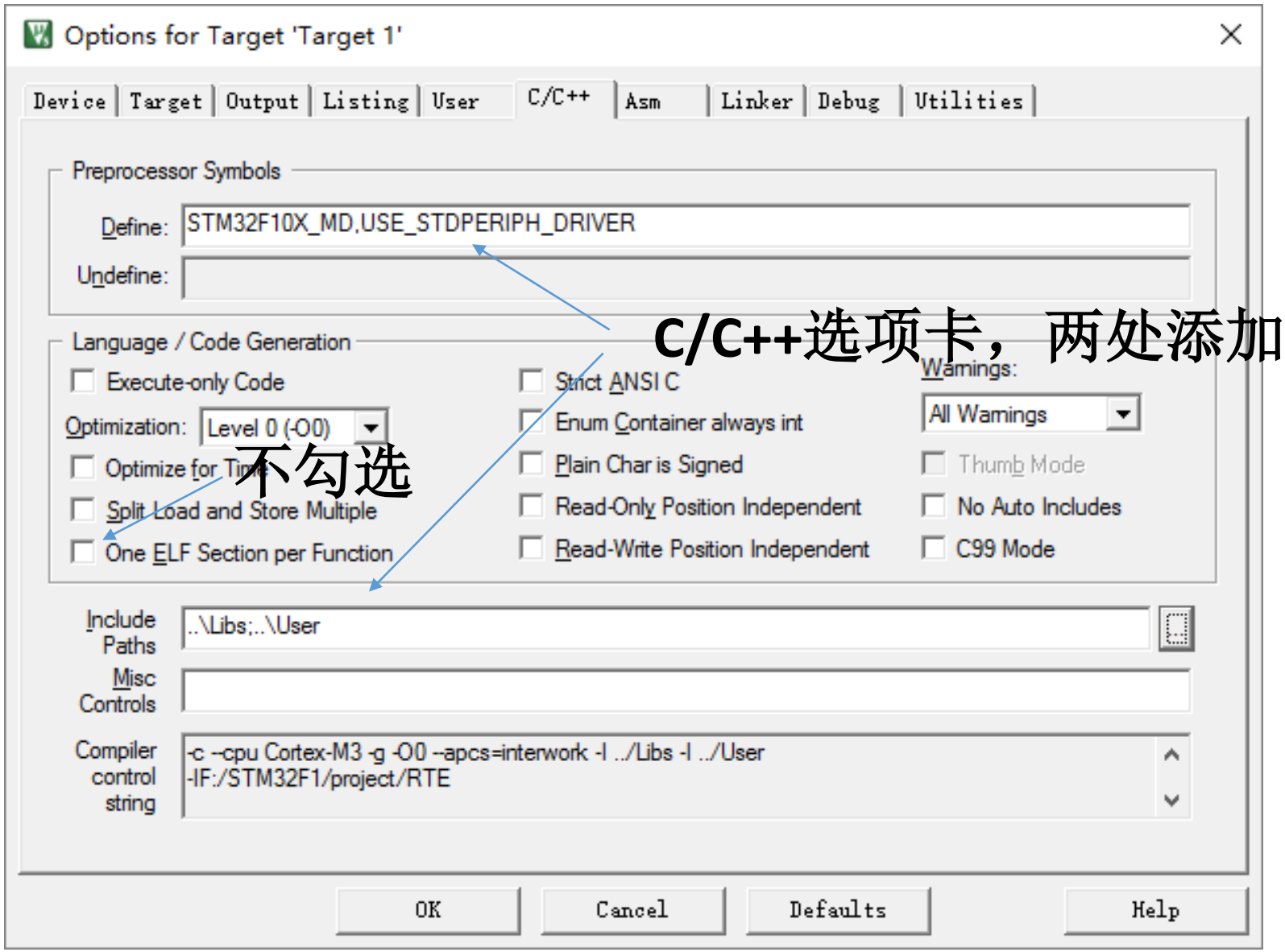
Options for Target 'Target 1'
Device
Target
Output
Listing
User
C/C++
Asm
Linker
Debug
Utilities
Preprocessor Symbols
Define:
STM32F10X_MD,USE_STDPERIPH_DRIVER
Undefine:
Language / Code Generation
Execute-only Code
Optimization:
Level 0 (-O0)
Optimize for Time
Split Load and Store Multiple
One ELF Section per Function
Strict ANSI C
Enum Container always int
Plain Char is Signed
Read-Only Position Independent
Read-Write Position Independent
Warnings:
All Warnings
Thumb Mode
No Auto Includes
C99 Mode
Include Paths
..\Libs;..\User
Misc Controls
Compiler control string
-c --cpu Cortex-M3 -g -O0 --apcs=interwork -I ../Libs -I ../User
-IF:/STM32F1/project/RTE
OK
Cancel
Defaults
Help
C/C++选项卡，两处添加
不勾选

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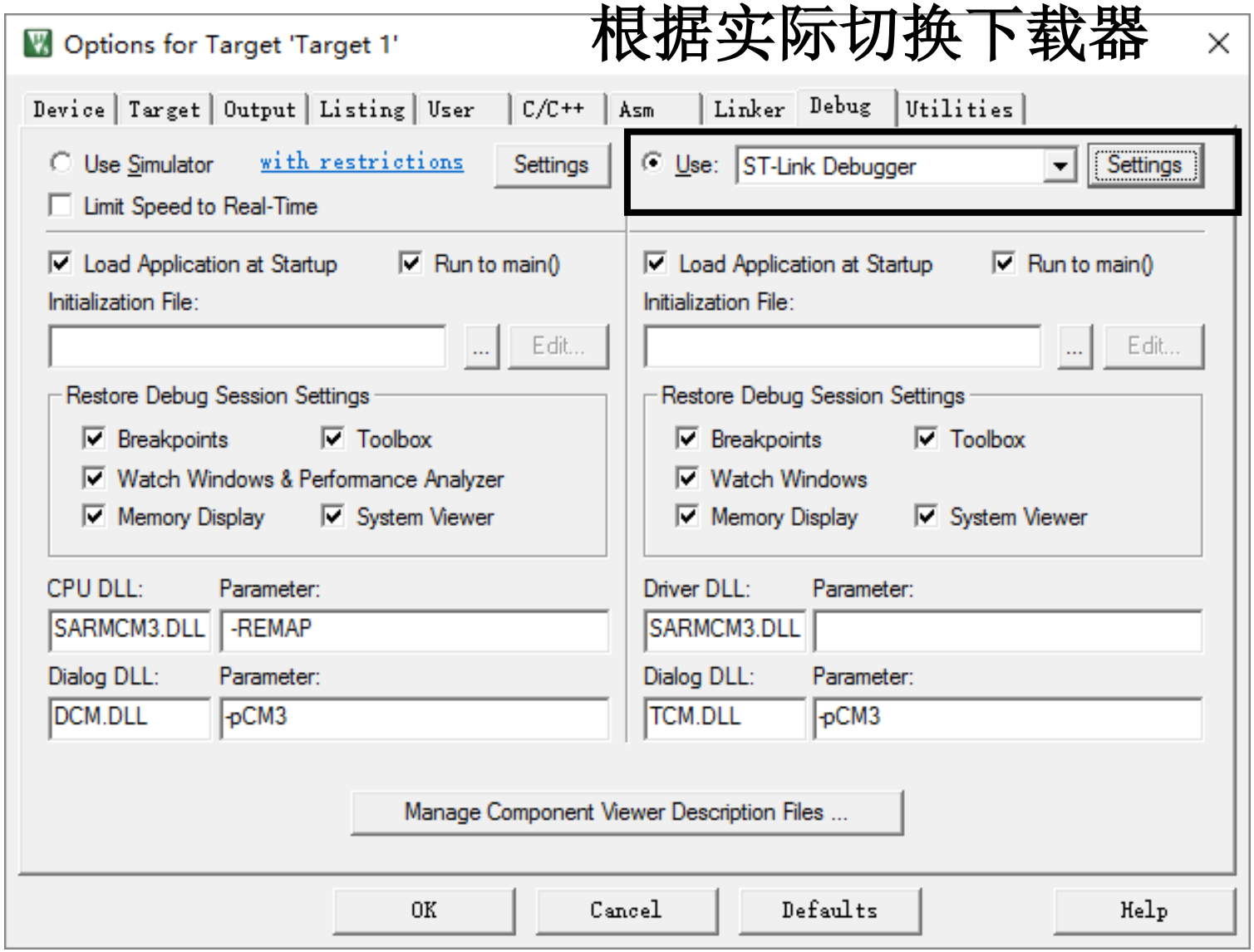
Debug选项卡，
根据实际切换下载器



经过以上步骤后，
点击Rebuild进行编译，
0 error(s)说明通过