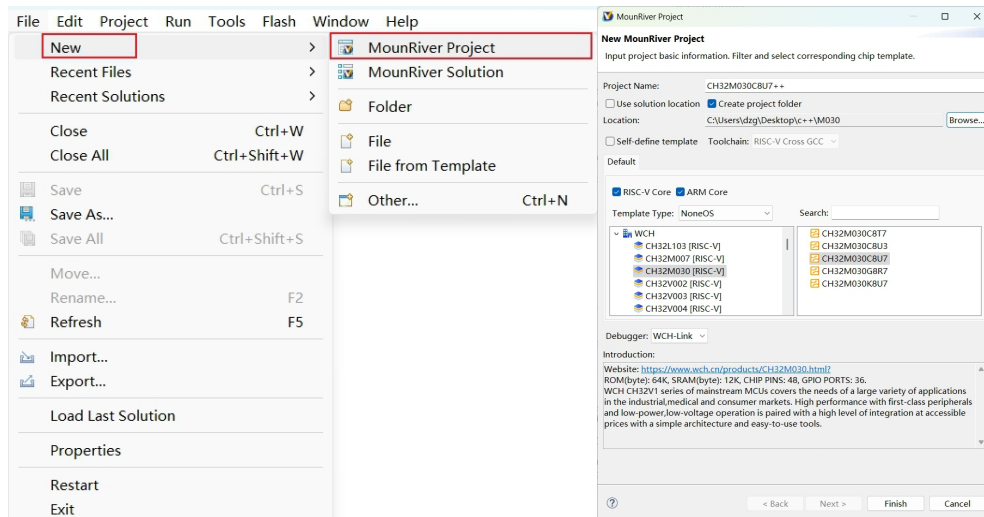


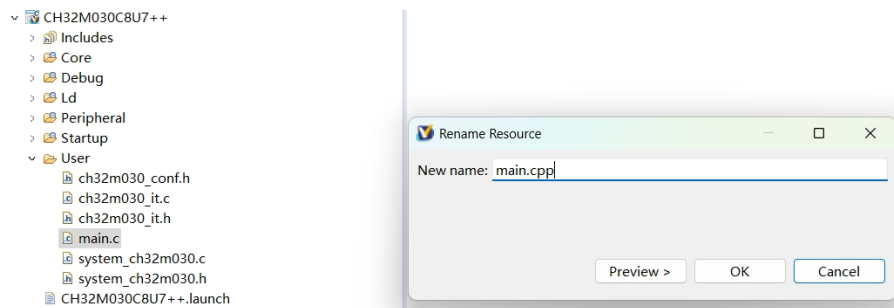
Create a C++ project based on MRS

Create a C++ project based on MRS . First build a main.c project , and then modifying the configuration so that the .cpp file calls the C++ compiler to compile it. The detailed steps are as follows.

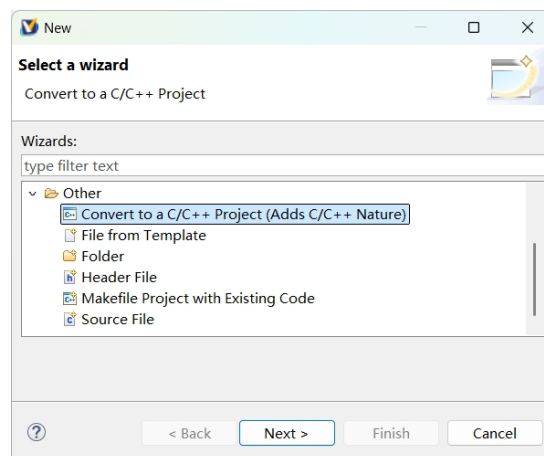
1. Normally create a project based on .C



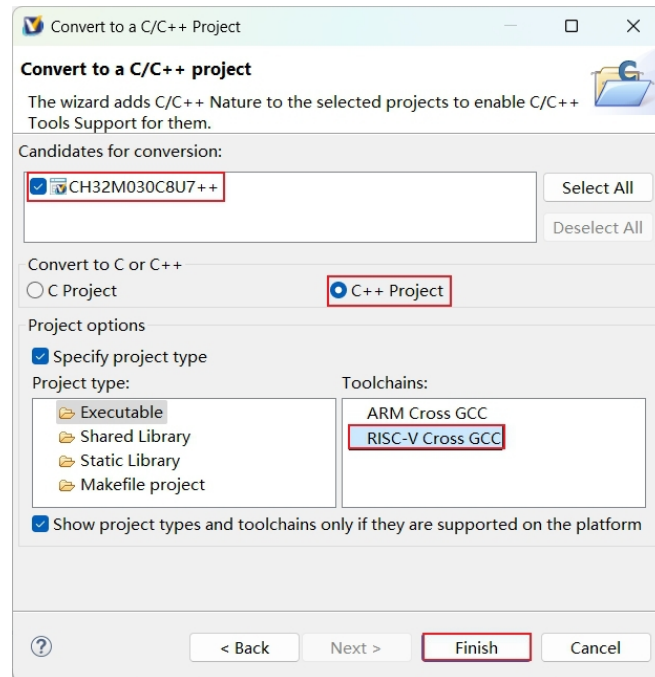
2. Make the main.c file into main.cpp by renaming it. Of course, you can also add a new .cpp by adding a File.



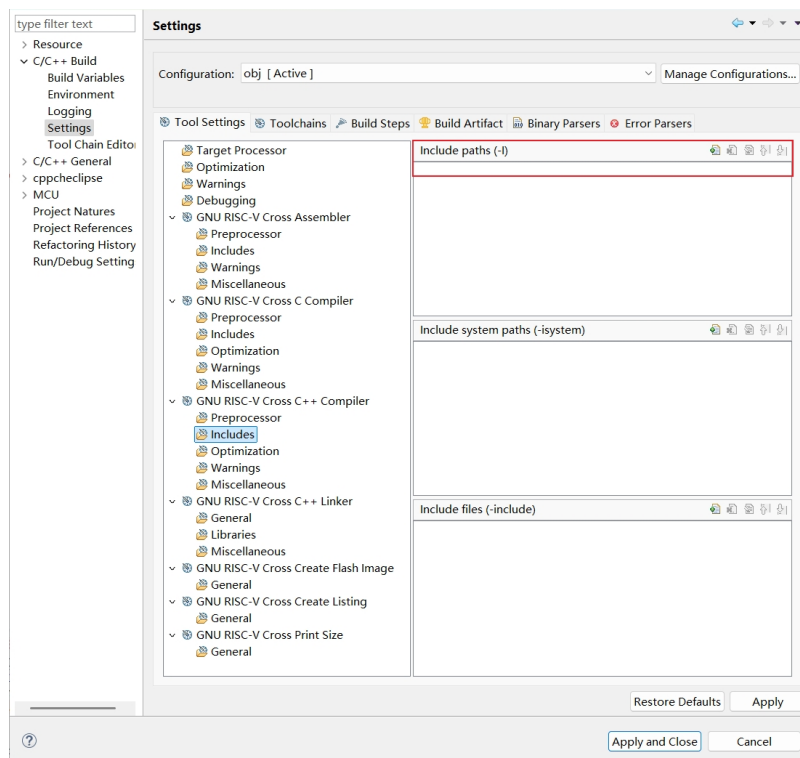
3. Right-click the project, new->other, select it according to the following figure, and then click Next.



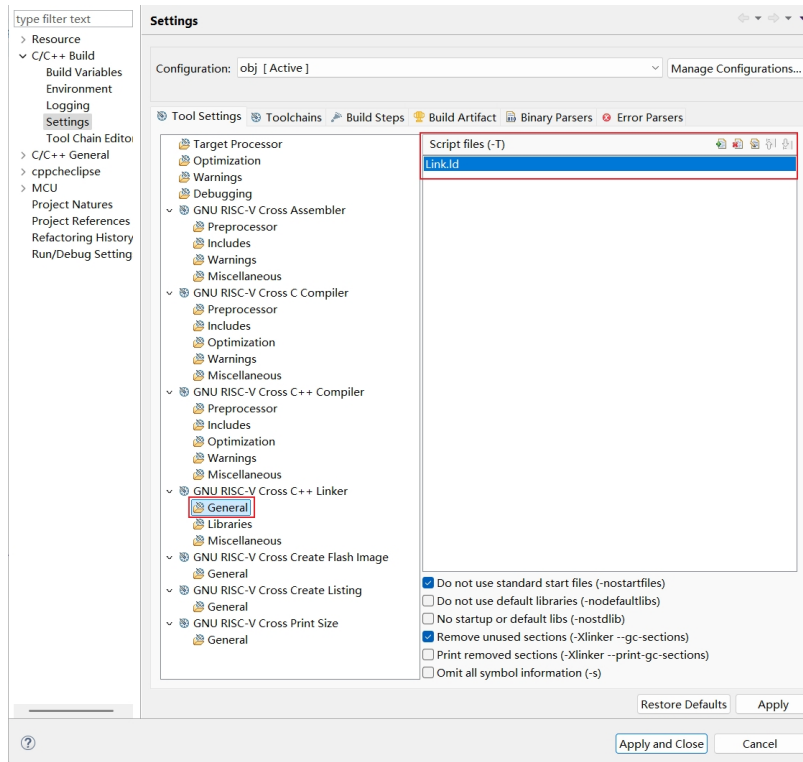
4. Configure as shown below



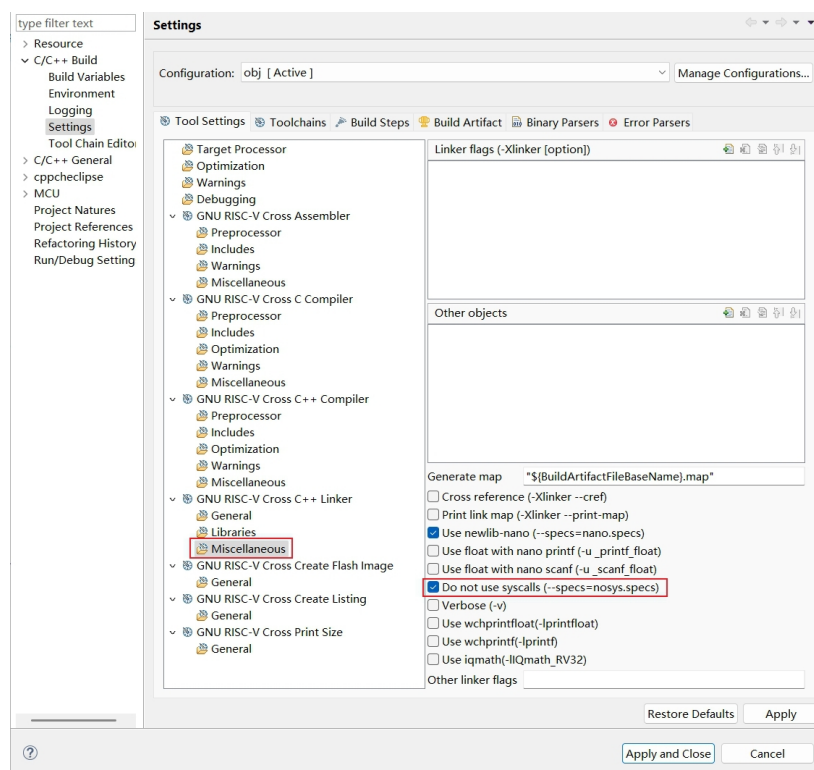
5. The original settings will become the default and need to be added again.



Add the header file path in the above image.



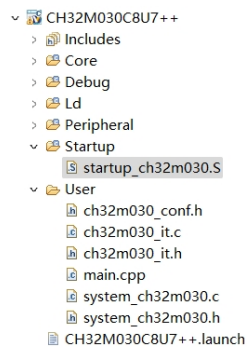
Add the link script path in the above figure.



The above figure uses the default function, if the original project uses the library, the library also needs to be added again after conversion.

6. Add the C++ initialization function before the main function is called in the startup file.

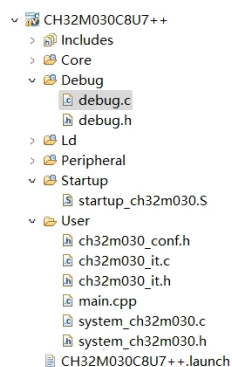
```
la a0, __libc_fini_array
call atexit
call __libc_init_array
```



```
187 li t0, 0x1
188 csrw 0xbcl, t0
189 /* Enable global interrupt and configure priv
190 li t0, 0x88
191 csrw mstatus, t0
192 /* Configure entry address mode */
193 la t0, _start
194 ori t0, t0, 3
195 csrw mtvec, t0
196
197 la a0, __libc_fini_array
198 call atexit
199 call __libc_init_array
200
201 jal SystemInit
202 la t0, main
203 csrw mepc, t0
204 mret
205
```

7. Two more empty functions are needed and must be declared in files with a .c suffix.

```
void _fini() {}
void _init() {}
```



```
237 *
238 * @brief Change the spatial position of data segment.
239 *
240 * @return size: Data length
241 */
242 void *_sbrk(ptrdiff_t incr)
243 {
244     extern char _end[];
245     extern char _heap_end[];
246     static char *curbrk = _end;
247
248     if ((curbrk + incr < _end) || (curbrk + incr > _heap_end))
249         return NULL - 1;
250
251     curbrk += incr;
252     return curbrk - incr;
253 }
254
255 void _fini() {}
256 void _init() {}
257
```

8. At this point the project file environment has been configured, the files with the .cpp suffix will call the C++ compiler to compile.