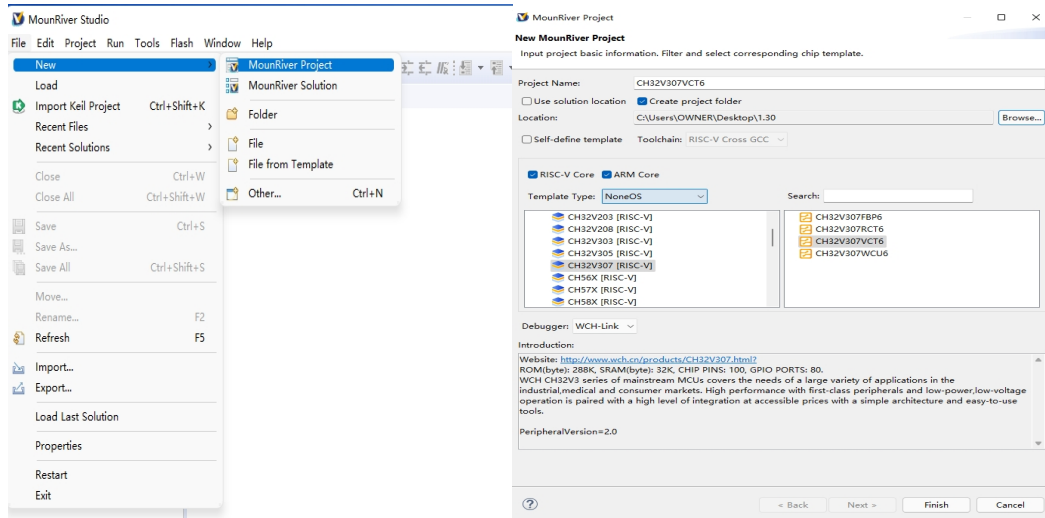


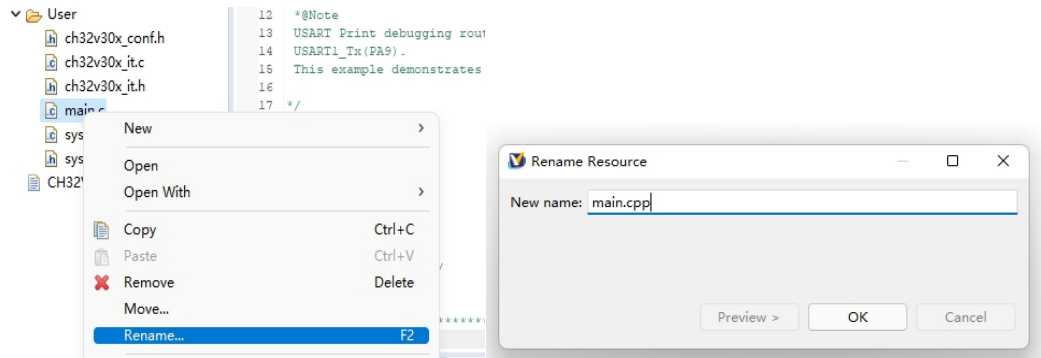
Create a C++ project based on MRS

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.

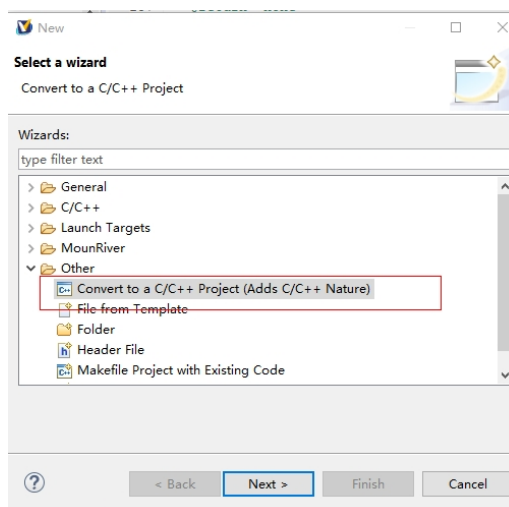
1. Normally create a project based on .C



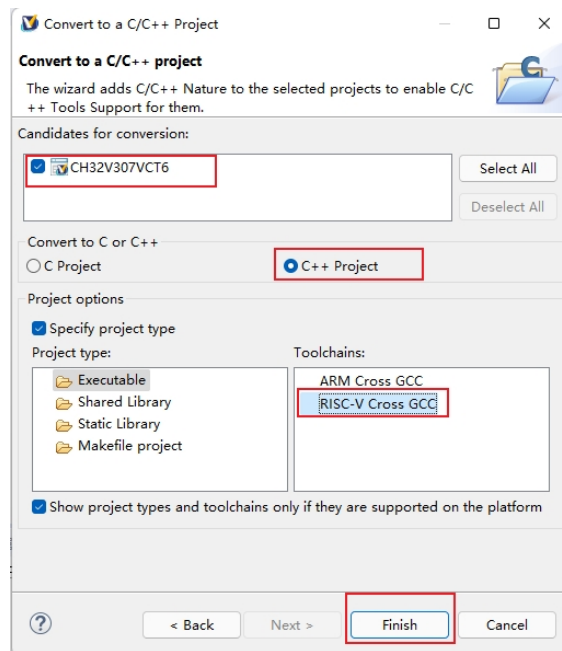
2. Make the main.c file into main.cpp by renaming it. Of course, you can also add a new .cpp by adding a File.



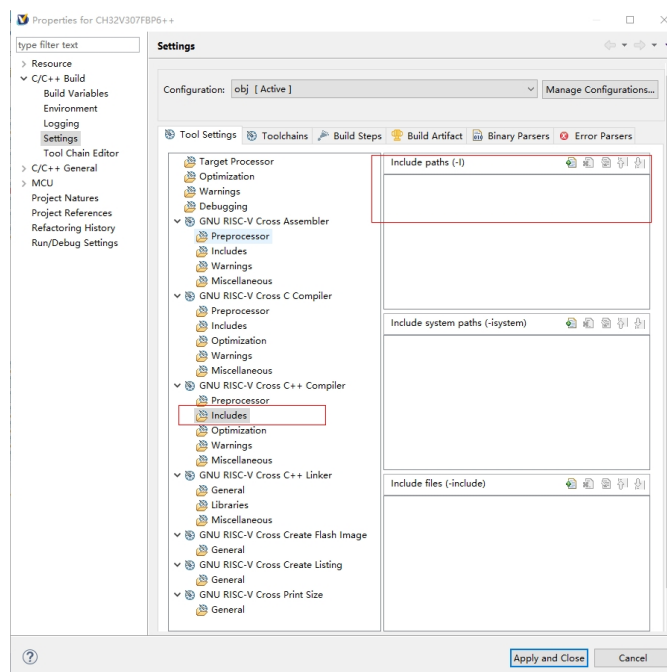
3. Right-click the project, new->other, select it according to the following figure, and then click Next.



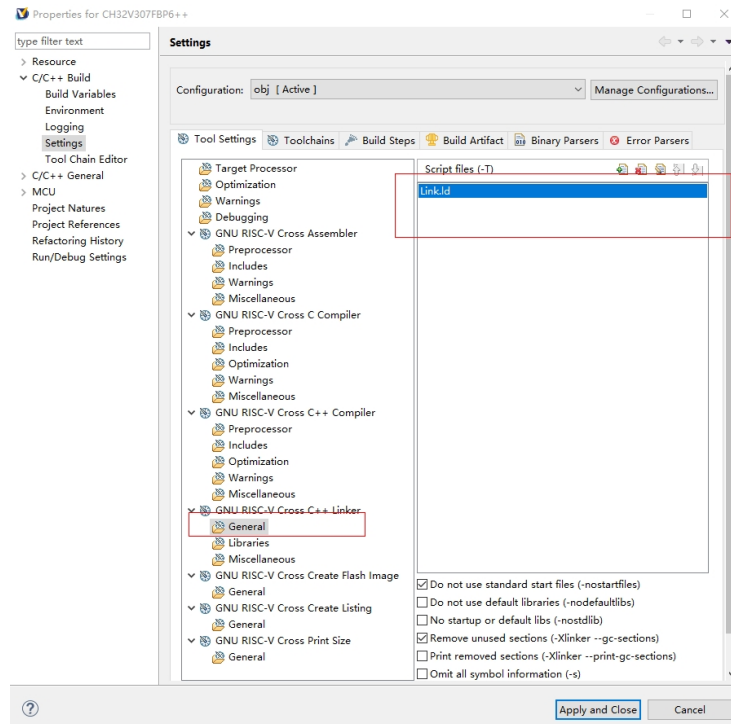
4. Configure as shown below



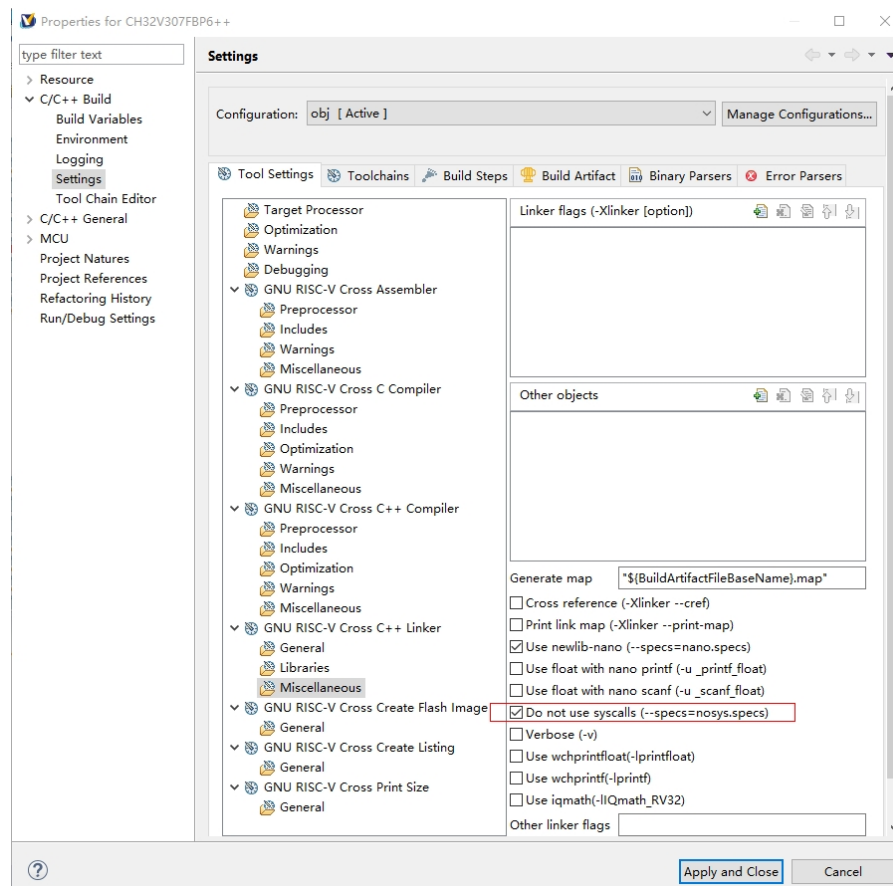
5. The original settings will become the default and need to be added again.



Add the header file path in the above image.



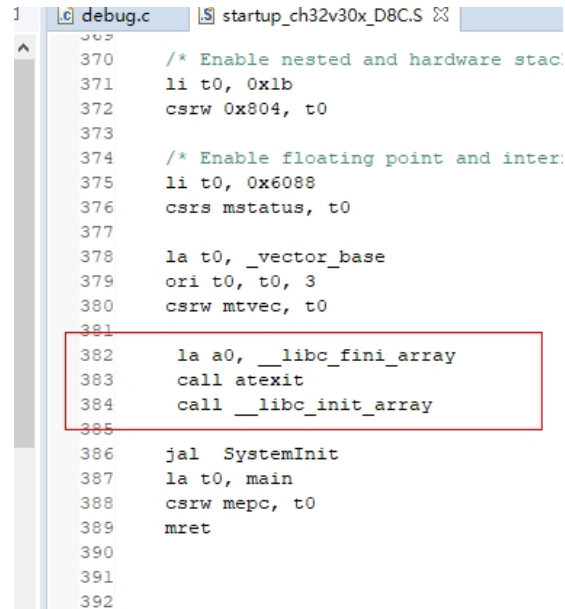
Add the link script path in the above figure.



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

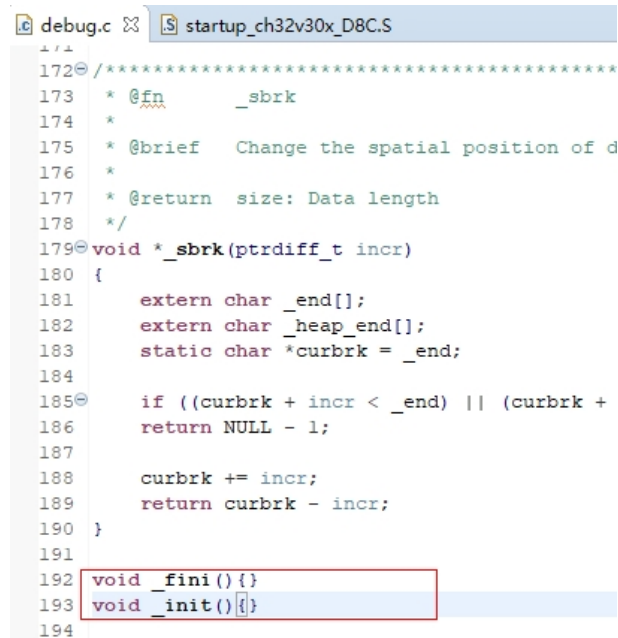
```
la a0, __libc_fini_array
call atexit
call __libc_init_array
```



```
370      /* Enable nested and hardware stack
371      li t0, 0x1b
372      csrw 0x804, t0
373
374      /* Enable floating point and integer
375      li t0, 0x6088
376      csrs mstatus, t0
377
378      la t0, _vector_base
379      ori t0, t0, 3
380      csrw mtvec, t0
381
382      la a0, __libc_fini_array
383      call atexit
384      call __libc_init_array
385
386      jal SystemInit
387      la t0, main
388      csrw mepc, t0
389      mret
390
391
392
```

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

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



```
172  /* *****
173  * @fn      _sbrk
174  *
175  * @brief   Change the spatial position of d
176  *
177  * @return  size: Data length
178  */
179  void *_sbrk(ptrdiff_t incr)
180  {
181      extern char _end[];
182      extern char _heap_end[];
183      static char *curbrk = _end;
184
185      if ((curbrk + incr < _end) || (curbrk +
186      return NULL - 1;
187
188      curbrk += incr;
189      return curbrk - incr;
190  }
191
192  void _fini() {}
193  void _init() {}
194
```

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