

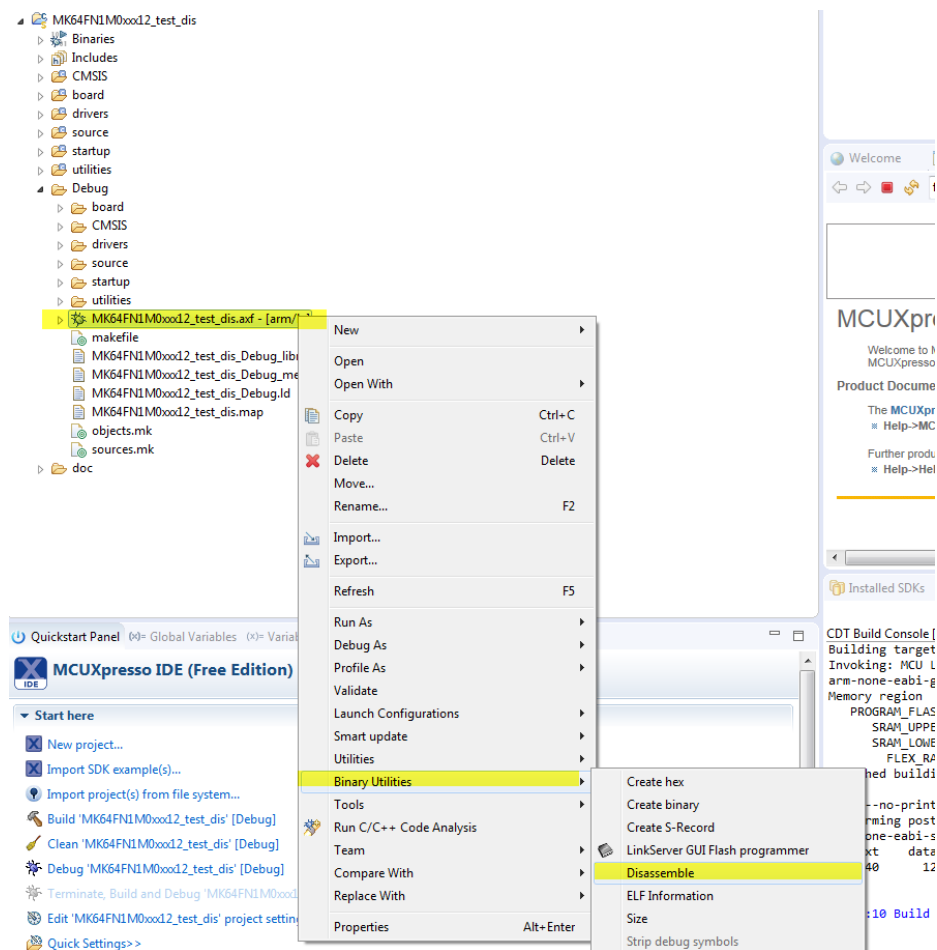
Generating Disassemble File under MCUXpresso IDE

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Checking disassemble code is often needed for programmers when developing a project. This article will introduce two methods of generating disassemble file under MCUXpresso IDE 10.1.0.

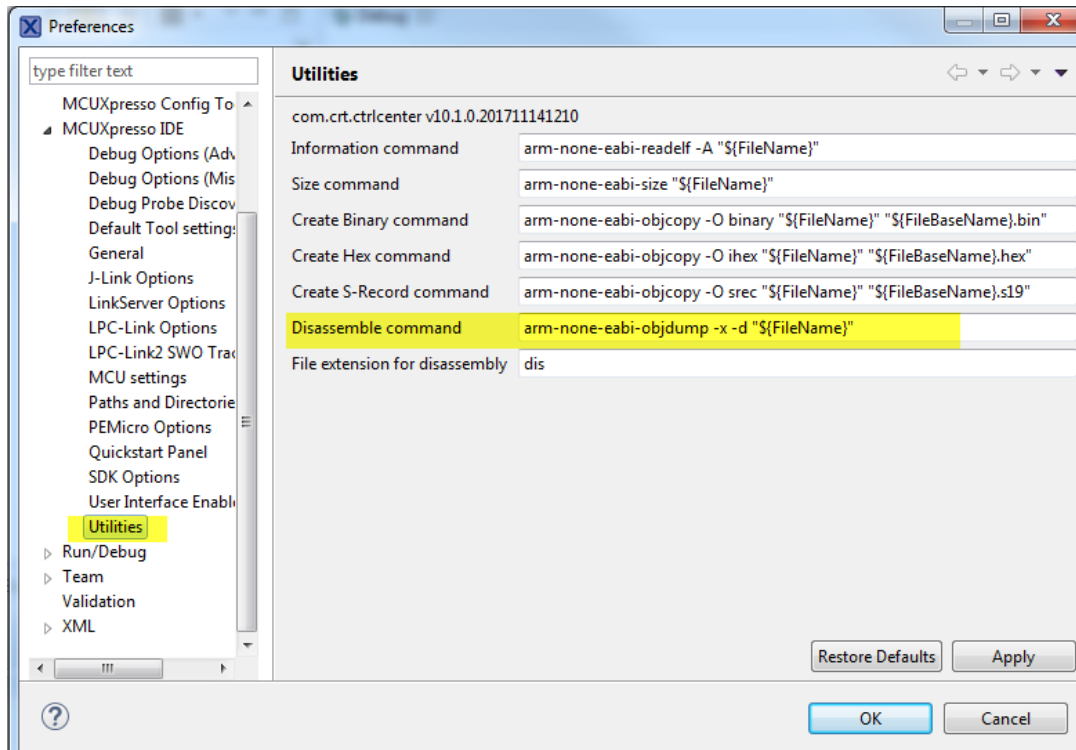
1. Method1: Generate disassemble code with Using Binary Utilities

The simplest way to create a disassemble file is to open up the Debug (or Release) folder in Project Explorer right click on the .axf file, and "Binary Utilities->disassemble



Then we can see disassemble file generated in MCUXpresso IDE.

User can also change the underlying commands and options that are called by these menu entries from the " Preferences->MCUXpresso IDE ->Utilites" preference page. This option invokes the GUN utilities disassemble command **arm-none-eabi-objdump.exe**.



The simple syntax of objdump is:

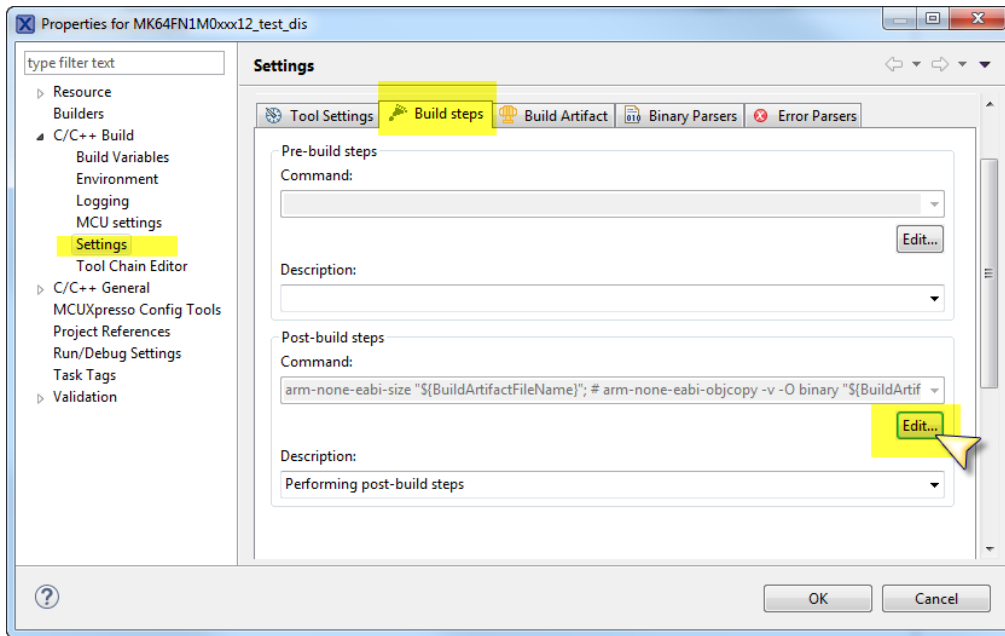
arm-none-eabi-objdump.exe <output options> <file name>

All the GUN utilities included in MCUXpresso IDE can be found in its install path:

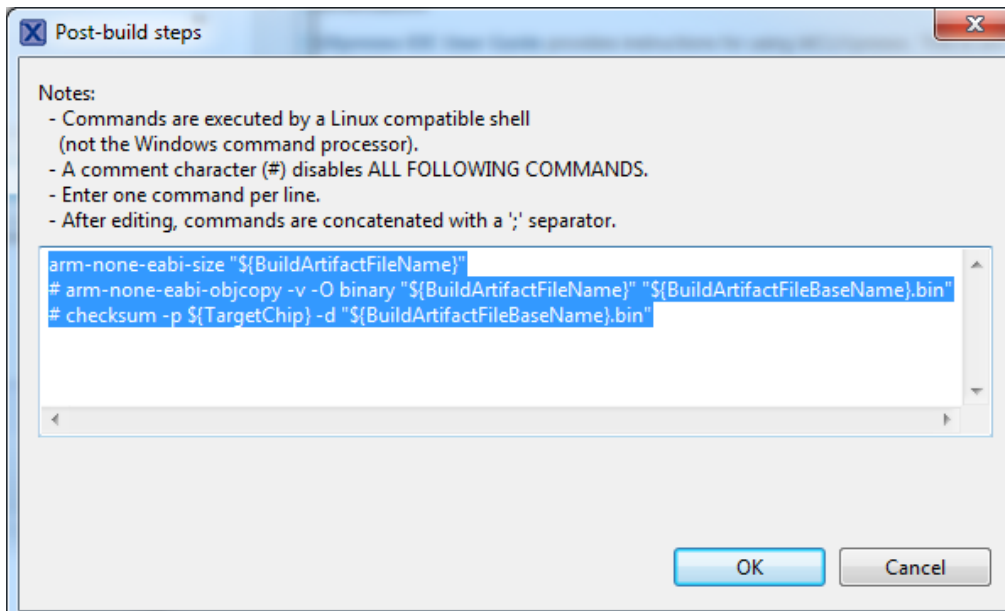
C:\nxp\MCUXpressoIDE_10.1.0_589\ide\tools\bin

2. Method 2: Generate disassemble code from Post-build Command Line

The Post-build Steps can be found under "Properties->C/C++ Build->Settings-> Build Steps"

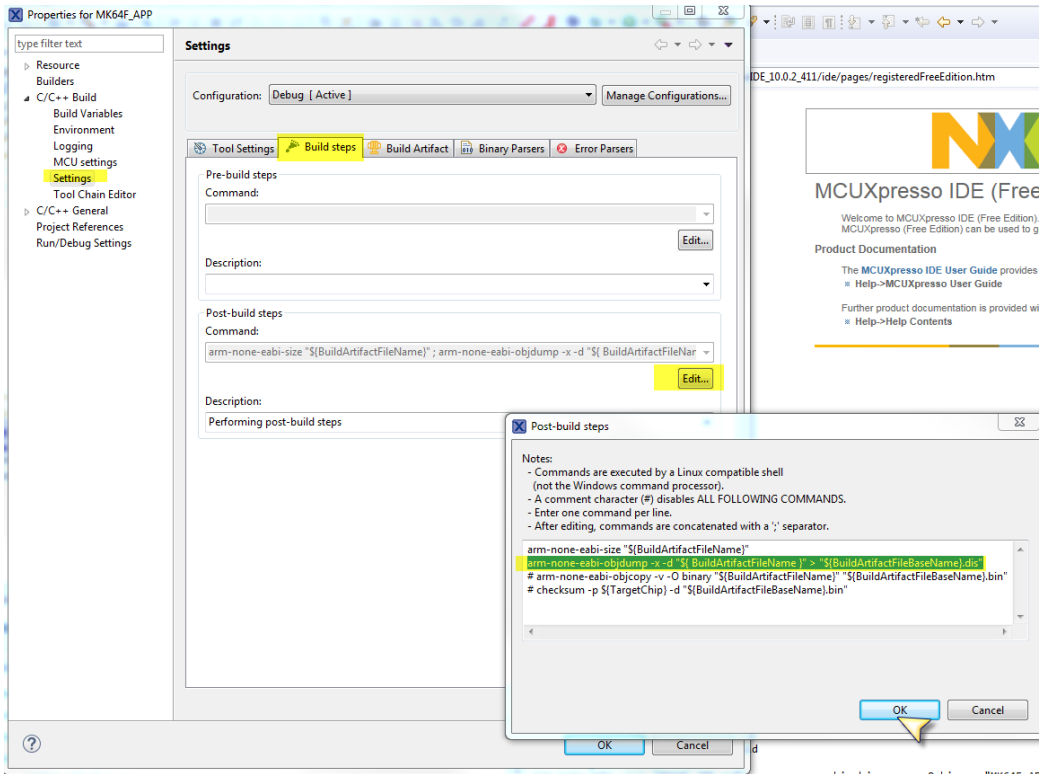


Click on "Edit" button to edit commands. The default command is like this:

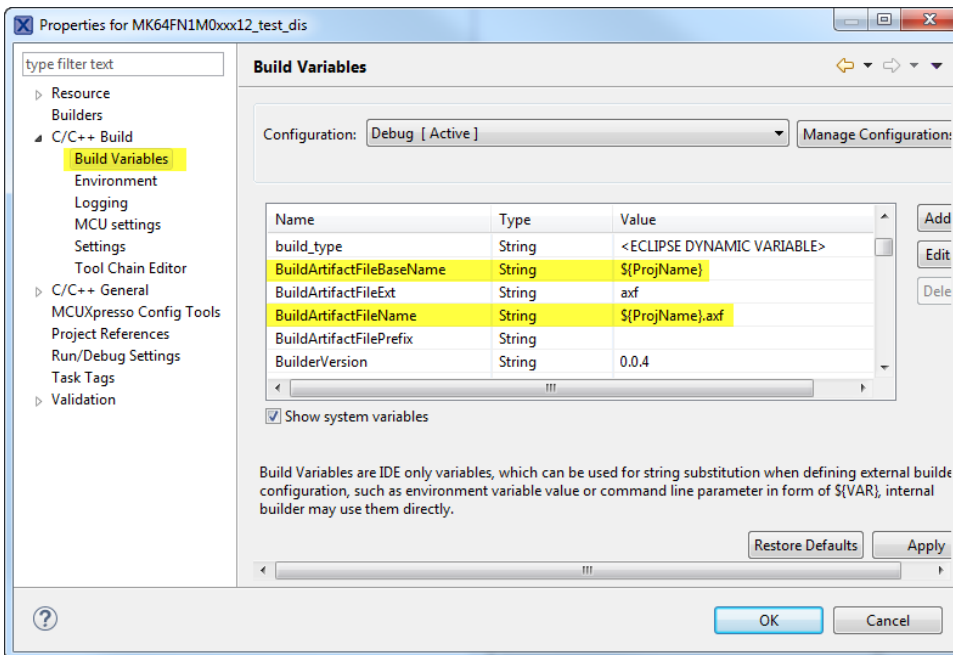


We add below command to to Post-build commandline

```
arm-none-eabi-objdump -x -d "${BuildArtifactFileName}" > "${BuildArtifactFileName}.dis"
```



Here, “BuildArtifactFileName” and “BuildArtifactFileName” are system variables. We can find the definition in project properties



Description of argument “-x” and “-d”

-x, ---- Display the contents of all headers

-d, ---- Display assembler contents of executable sections

Direction operator ">" , ---- Redirect the output content to a file.

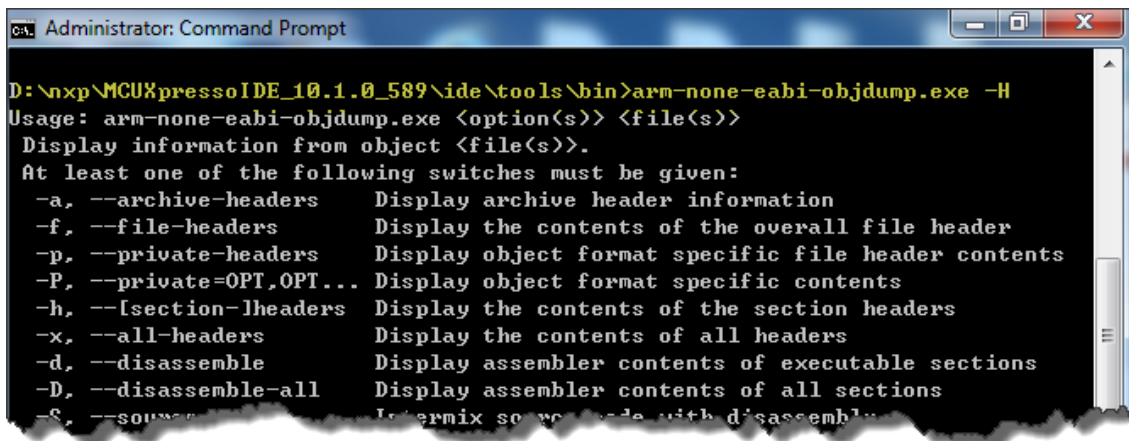
The command line arguments to GNU objdump utility are described here:

<https://sourceware.org/binutils/docs/binutils/objdump.html>

or

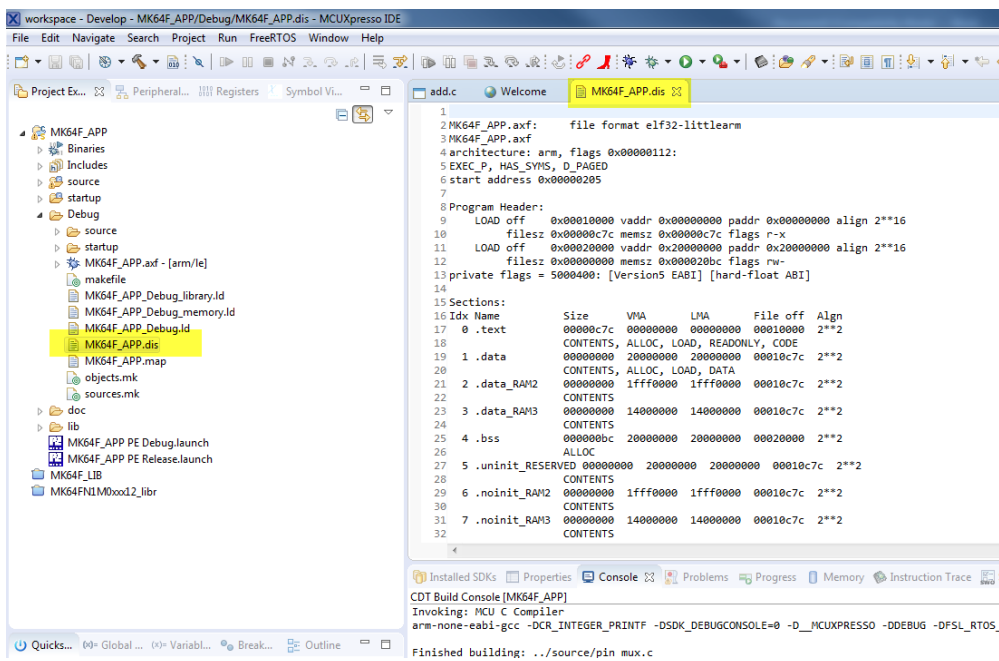
check help with command prompt:

arm-none-eabi-objdump.exe -H



```
Administrator: Command Prompt
D:\nxp\MCUXpressoIDE_10.1.0_589\ide\tools\bin>arm-none-eabi-objdump.exe -H
Usage: arm-none-eabi-objdump.exe <option(s)> <file(s)>
Display information from object <file(s)>.
At least one of the following switches must be given:
-a, --archive-headers    Display archive header information
-f, --file-headers      Display the contents of the overall file header
-p, --private-headers   Display object format specific file header contents
-P, --private=OPT,OPT... Display object format specific contents
-h, --[section-]headers Display the contents of the section headers
-x, --all-headers       Display the contents of all headers
-d, --disassemble       Display assembler contents of executable sections
-D, --disassemble-all  Display assembler contents of all sections
-S, --source             Display source code with disassembly
```

Build project, we will see disassemble file generated



Reference:

{MCUXpressoIDE_10.1.0_589 install folder}\MCUXpresso_IDE_User_Guide.pdf

<https://mcuoneclipse.com/2017/03/29/mcuxpresso-ide-s-record-intel-hex-and-binary-files/>

<https://sourceware.org/binutils/docs/binutils/objdump.html>