

# Conventions for Assembly Code

## Organization:

1. Absolute/Single File Source. Use organization described in Chapter 3 for monitor run programs. Use organization described in Chapter 10 for standalone programs.
2. All assembly sources must be, at least, source relocatable as described in Chapter 5.
3. All instruction mnemonics must start on the same column.
4. Ownership/Revisions – All programs that contain code that you write must include your name and revision date. If the program is essentially all your code, it should contain your name with the last date of revision. If the program contains other programmer's code, you must receive permission to use the code and clearly acknowledge the name of the original programmer(s). Your revisions/additions must be described with your name and date of the revision.

## Comments:

1. Comments should make the code easier to read and understand. Therefore, it should not add clutter to the source and describe the source at a higher level.
3. Comments should not be a redundant description of a statement or instruction.
4. Comment headers are required at the start of a module, for each routine or function.

## Naming Conventions:

1.

Symbol Type	Convention
Equated constants	All caps with underscores to separate words.
Stored constants, and global variables	Mixed case. Multiple words are combined into one word with the first letter of each word capitalized.
Subroutine names	Mixed case. Multiple words are combined into one word with the first letter of each word capitalized.
All other labels	All lower case with or without underscores to separate words.
Section names	All start with a period.

2. Data object names should be nouns while routines should describe an action.
3. MCU I/O and control register names must be the same as the name used in the Freescale documentation.
4. Routines from a prewritten module must use the documented name from the module – even if it violates normal naming conventions.
5. Never use two symbols for different purposes that only differ by a change in case.

## Other Conventions:

1. Indexed addressing with an offset of zero must show the zero explicitly. i.e.  $\theta, x$  not  $, x$  or  $x$  even if it works in the assembler.
2. Never add spaces between operand arguments.
3. All dead code and comments must be removed. e.g. when using a template, delete all code and comments that are not required for the new program.