

CODING STANDARDS

Coding standard are set of some coding rules followed by the programmers in designing an embedded system and basically introduced for reducing the bugs in embedded software. They help firmware developers in reducing hazards and time spent in the debugging stage of their projects ,they also improve the maintainability and portability of the software.

➤ Present,BARR-C and MISRA C are the two most widely followed Embedded C coding standards.Where MISRA C is concerned with promoting in developing safety and security related embedded systems whereas BARR-C was developed to minimize bugs in firmware by focusing on practical rules that keep bugs out.

- Some C Coding Standards :

1. Each line shall contain atmost 120 characters.
2. Only one assignment should be in single line.
3. Only one return statement shall be in a function.
4. Variables shall be used after initialization
5. Functions shall be called after declaration
6. The array size shall be specified explicitly.
7. Gobal variables shall be declared only once.
8. A non-void function shall have a return statement and return value rather than empty return.
9. A non-static function should be declared in header file
10. All static functions shall be used within the file in which they are declared.
11. Recursion shall not be used in function calls.
12. The loop body should be enclosed with brackets.
13. A switch statement shall have default statement.
14. An else statement should not be empty if it is following an else if statement.

15. Every switch clause shall be terminated with a break statement.
 16. A string literal shall not be modified.
 17. The function name, global variable shall be unique.
 18. The local variable name shall not be same as global variable name.
 19. A variable name shall not be same as struct, union or enum.
 20. Braces after if/for/while/switch/do shall be on same line.
- There are many coding standards in C programming language and I mentioned only some of them which are majorly known and followed .