

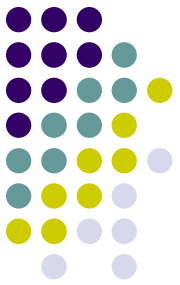
# Two execution environments



C standard identifies two categories of execution environments:

- Hosted
  - It assumes full OS and implementation of all the standard libraries.
  - Function main is program's start point.
- Freestanding
  - OS can provide only simple things, and these are only required headers: `float.h`, `iso646.h`, `limits.h`, `stdarg.h`, `stdbool.h`, `stddef.h`.
  - Function main has no special meaning. How program execution starts can be defined entirely different.

# MISRA C 2004



- Rule 1.2 (required): No reliance shall be placed on undefined or unspecified behavior.
- Rule 2.4 (advisory): Sections of code should not be “commented out”.
- Rule 3.1 (required): All usage of implementation-defined behavior shall be documented.
- Rule 5.2 (required): Identifiers in an inner scope shall not use the same name as an identifier in an outer scope, and therefore hide that identifier.
- Rule 6.1 (required): The plain char type shall be used only for the storage and use of character values.
- Rule 7.1 (required): Octal constants (other than zero) and octal escape sequences shall not be used.
- Rule 8.5 (required) There shall be no definitions of objects or functions in a headerfile.
- Rule 8.6 (required): Functions shall be declared at file scope.
- Rule 16.2 (required): Functions shall not call themselves, either directly or indirectly.