

C Programming Language

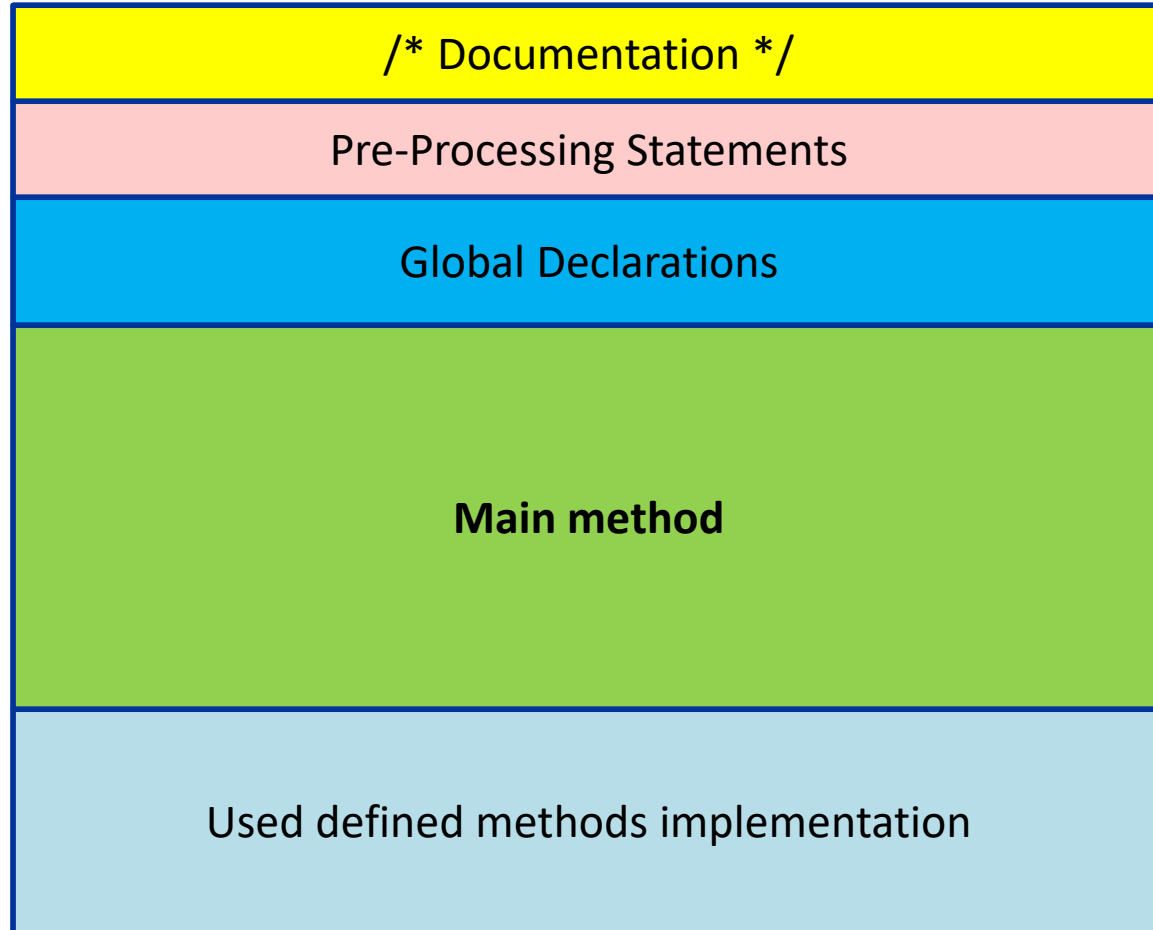
Basics

Basics of C Programming?

C is a **structured** programming language. So every instruction in a c program must follow the predefined structure (Syntax).

C is also known as **Function Oriented** Programming Language. So every executable statement must written inside a function.

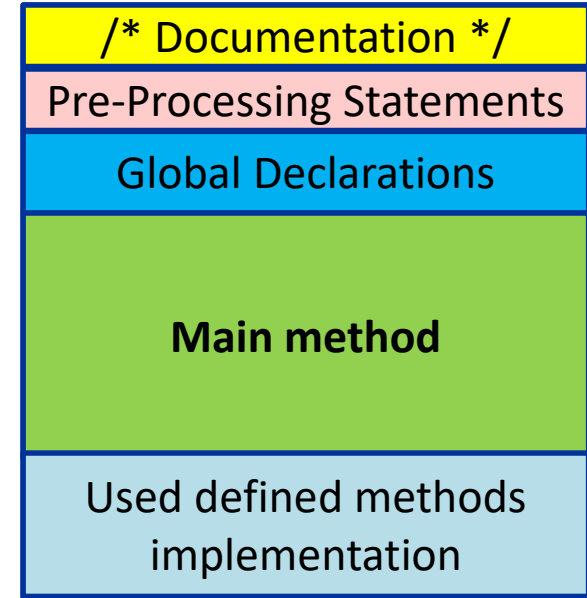
General Structure of a C Program



General Structure of a C Program

Documentation

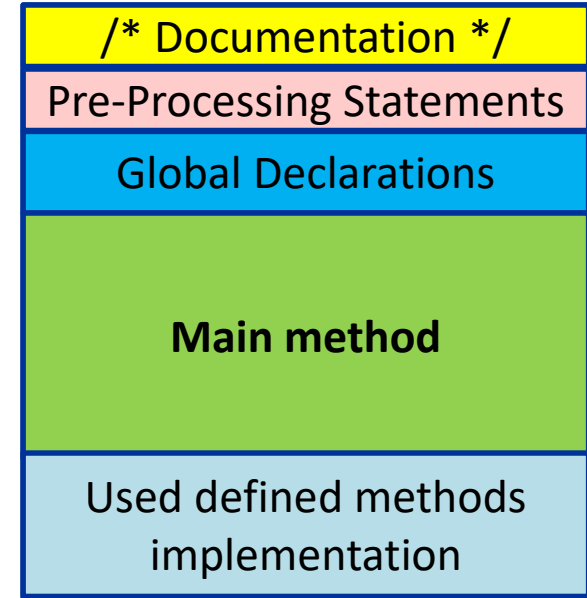
- It is used to provide brief information of the program.
- This part is written using comments.
- Generally the documentation part does not executed by compiler & it is optional part.



General Structure of a C Program

Pre-Processing Statements

- It is used to link the header files, define the constants, etc...
- Every preprocessor statement starts with hash (#) symbol.
- Every Preprocessor statement tells to the compiler to perform required pre-processing before the actual compilation.

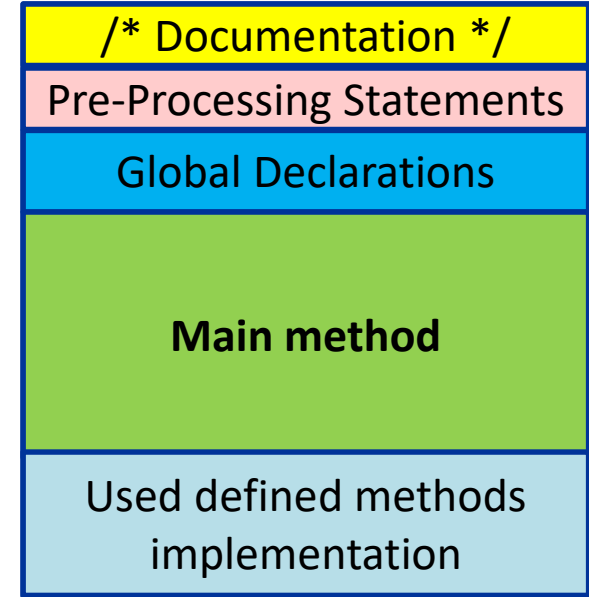


General Structure of a C Program

Pre-Processing Statements

- Examples

#include
#define
#undef
#ifdef
#ifndef
#if
#else
#elif
#endif
#error
#pragma



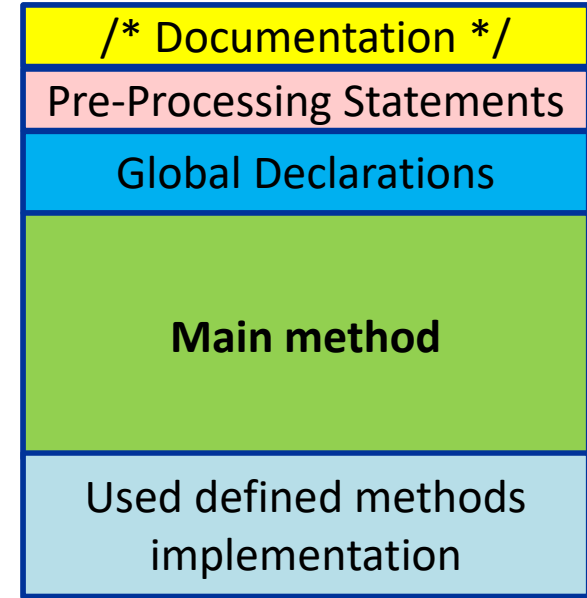
General Structure of a C Program

Preprocessor Directives	Description
#define	Used to define a macro
#undef	Used to undefine a macro
#include	Used to include a file in the source code program
#ifdef	Used to include a section of code if a certain macro is defined by #define
#ifndef	Used to include a section of code if a certain macro is not defined by #define
#if	Check for the specified condition
#else	Alternate code that executes when #if fails
#endif	Used to mark the end of #if, #ifdef, and #ifndef

General Structure of a C Program

Global Declaration

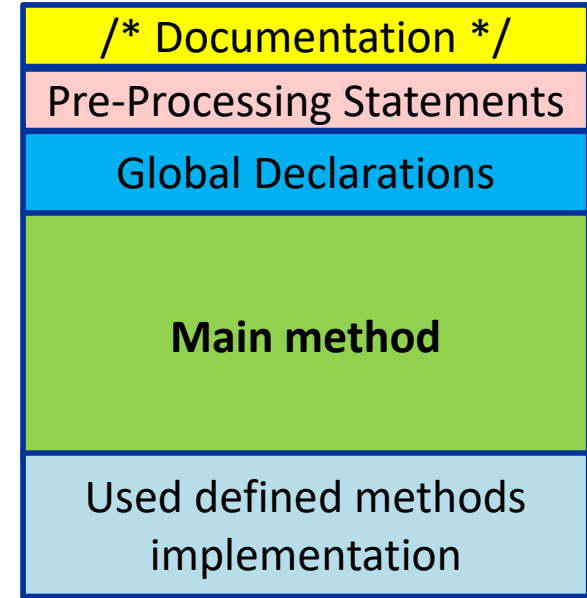
- This part is used to declare the variables which are common for multiple methods.
- In this section, we also declare enumeration, structure, unions, userdefined methods etc...
- It is also optional part. According to our requirement we write this section.



General Structure of a C Program

Main method

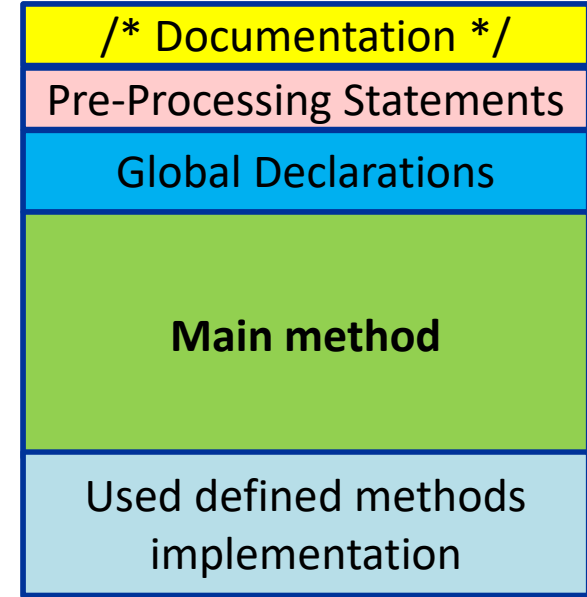
- main method is the compulsory part for any c program.
- C language is a function oriented programming language, so every c program must have at least one function and that must be main.
- Main is a userdefined method which specifies the starting point of the program execution.
- Every c program execution starts with main method and ends with main method itself.



General Structure of a C Program

Userdefined Methods

- In this section of the program we write the actual code for the userdefined methods.
- Userdefined methods can be implemented either before or after the method.
- If it is implemented after the main then it must be declared either inside or before the main method.
- If it is implemented before the main then the declaration can be ignored.



General Structure of a C Program - Example

```
/* Program to print a message Hello World! */
```

```
#include<stdio.h>
```

```
void main()  
{  
  
    printf("Hello World!!!!");  
  
}
```

Rules for Writing C programs

- ⊙ Every c program must contain exact one main method
- ⊙ Every executable instruction must end with semicolon (;)
- ⊙ All the system defined words (Keywords) must be used in lowercase letters
- ⊙ Every open brace ({) must have the respective closing brace (})
- ⊙ The variables must be declared in the declaration section before they are used

Thank You!