

# Difference Between Structured and Unstructured Programming

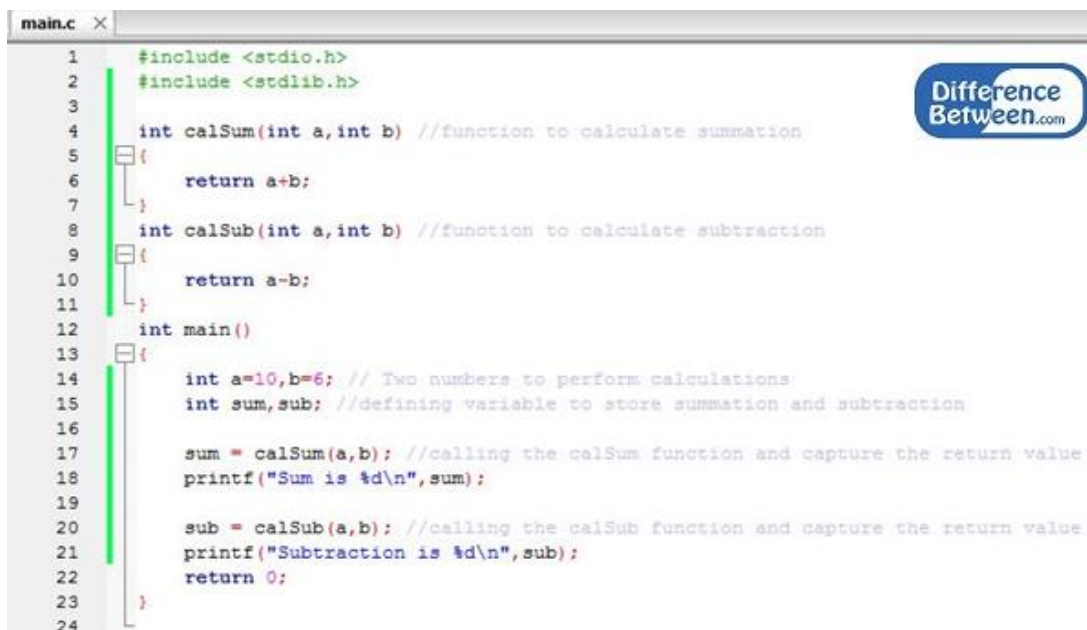
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## Key Difference - Structured vs Unstructured Programming

A computer [program](#) is a set of instructions for a computer to perform a task which is written using a [programming language](#). A programming paradigm can categorize the programming language depending on language features. Structured programming and Unstructured programming are two common programming paradigms. The **key difference** between Structured and Unstructured programming is that **Structured programming allows the programmer to divide the whole program into modules or functions and in Unstructured programming, the code is written as one block.**

## What is Structured Programming?

In Structured Programming, the code is divided into functions or modules. It is also known as modular programming. Modules or functions are a set of statements which performs a sub task. As each task is a separate module, it is easy for the programmer to test and debug. It is also easy to do modifications without changing the whole program. When changing the code, the programmer has to concentrate only on the specific module. C and Pascal are some examples of Structural Programming languages.

The image shows a code editor window titled 'main.c' with a line number column on the left. The code defines two functions: 'calSum' and 'calSub', and a 'main' function. 'calSum' takes two integers and returns their sum. 'calSub' takes two integers and returns their difference. The 'main' function declares variables 'a', 'b', 'sum', and 'sub', calls both functions with 'a=10' and 'b=6', and prints the results. A 'Difference Between.com' logo is visible in the top right corner of the code editor area.

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int calSum(int a,int b) //function to calculate summation
5 {
6     return a+b;
7 }
8 int calSub(int a,int b) //function to calculate subtraction
9 {
10    return a-b;
11 }
12 int main()
13 {
14    int a=10,b=6; // Two numbers to perform calculations
15    int sum,sub; //defining variable to store summation and subtraction
16
17    sum = calSum(a,b); //calling the calSum function and capture the return value
18    printf("Sum is %d\n",sum);
19
20    sub = calSub(a,b); //calling the calSub function and capture the return value
21    printf("Subtraction is %d\n",sub);
22    return 0;
23 }
24
```

Figure 01: Functions using C program

A programming language like C can use user-defined functions. Functions are called by the main program. Variables in the functions are called local variables, and global variables can be accessed by all the functions. Structured programming languages also use selections (if/ else) and iterations (for /do, while). Bellow program shows the functions using Structured programming language C. Program was written and executed using Code Blocks Development Environment.

## What is Unstructured Programming?

In Unstructured Programming, the code is written as a single whole block. The whole program is taken as a single unit. It is harder to do changes in the program. This paradigm was used in earlier versions of BASIC, COBOL, and FORTRAN. Unstructured programming languages have a limited number of data types like numbers, [arrays](#), strings.

## What is the Similarity Between Structured and Unstructured Programming?

- Both are programming paradigms.

## What is the Difference Between Structured and Unstructured Programming?

Structured vs Unstructured Programming	
Structured Programming is a programming paradigm which divides the code into modules or function.	Unstructured Programming is the paradigm in which the code is considered as one single block.
Readability	
Structured Programming based programs are easy to read.	Unstructured Programming based programs are hard to read.
Purpose	
Structured Programming is to make the code more efficient and easier to understand.	Unstructured programming is just to program to solve the problem. It does not create a logical structure.
Complexity	
Structured Programming is easier because of	Unstructured programming is harder when

modules.	comparing with the structured programming.
<b>Application</b>	
Structured programming can be used for small and medium scale projects.	Unstructured programming is not applicable for medium and complex projects.
<b>Modification</b>	
It is easy to do changes in Structured Programming.	It is hard to do modifications in Unstructured Programming.
<b>Data Types</b>	
Structured programming uses many data types.	Unstructured programming has a limited number of data types.
<b>Code Duplication</b>	
Structured programming avoids code duplication.	Unstructured programming can have code duplication.
<b>Testing and Debug</b>	
It is easy to do testing and debugging in Structured Programming.	It is hard to do testing and debugging in Unstructured programming.

## Summary - Structured vs Unstructured Programming

Structured and Unstructured programming are two paradigms in programming. The difference between Structured and Unstructured programming is that Structured programming languages allow the programmer to divide the whole program into modules or functions and in Unstructured programming, the program is written as one single block. Structured programming languages are the modern languages, and unstructured languages are the earliest versions of programming languages.

### Reference:

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### **How to Cite this Article?**

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