SNS COLLEGE OF TECHNOLOGY

Coimbatore-35.
An Autonomous Institution

COURSE NAME : 19CST101 PROGRAMMING FOR PROBLEM SOLVING

I YEAR/ I SEMESTER

UNIT-II C PROGRAMMING BASICS

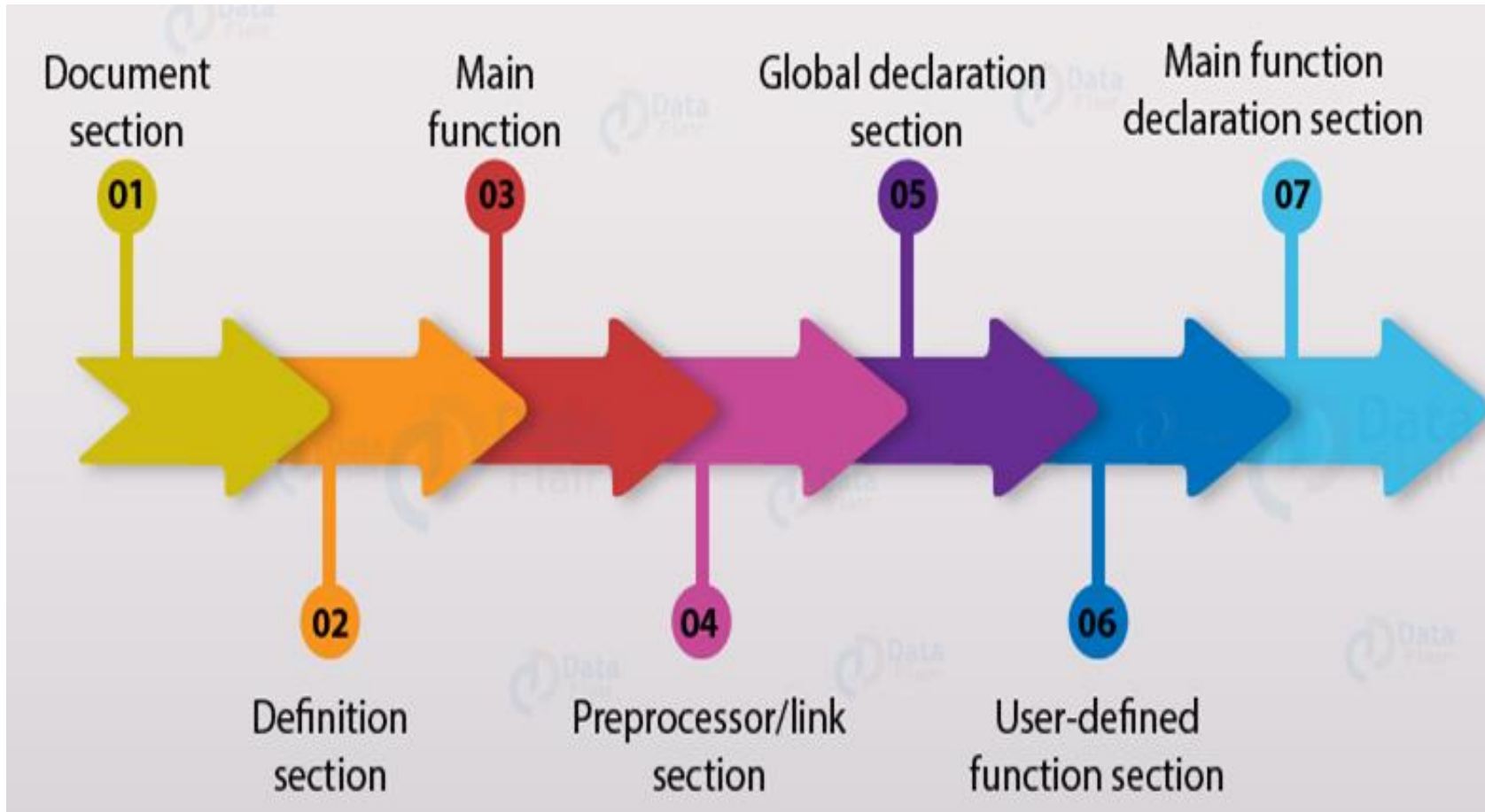**Topic: Structure of a 'C' program**

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Structure of C Program

Anatomy of a C Program

- **# include <stdio.h>** – is a preprocessor directive, includes all standard input-output files before compiling.

- **int main()** – from here the execution of the program starts.

- **{ (Opening bracket)** – beginning of any function in the program.

- **/* some comments */** – Whatever is inside /*———-*/ are not compiled and executed; they are only written for user understanding. These are known as multiline comments. Single line comments are represented with the help of 2 forward slashes "//———".

- **printf("Hello World")** – is included in the C stdio.h library, which helps to display the message on the output screen.

- **getch()** – helps to hold the screen.

- **return 0** – terminates the C program and returns a null value, that is, 0.

- **} (Closing brackets)** - end of the function.

Example of C Program Structure

- The "Hello World!" example is the most popular and basic program that will help you get started with programming.

- This program helps you display the output "Hello World" on the output screen.

```
File  Edit  View  Search  Terminal  Help
  GNU nano 2.9.3

#include <stdio.h>
int main()
{
// Our first basic program in C
printf("Hello World!\n\n");
return 0;
}
```
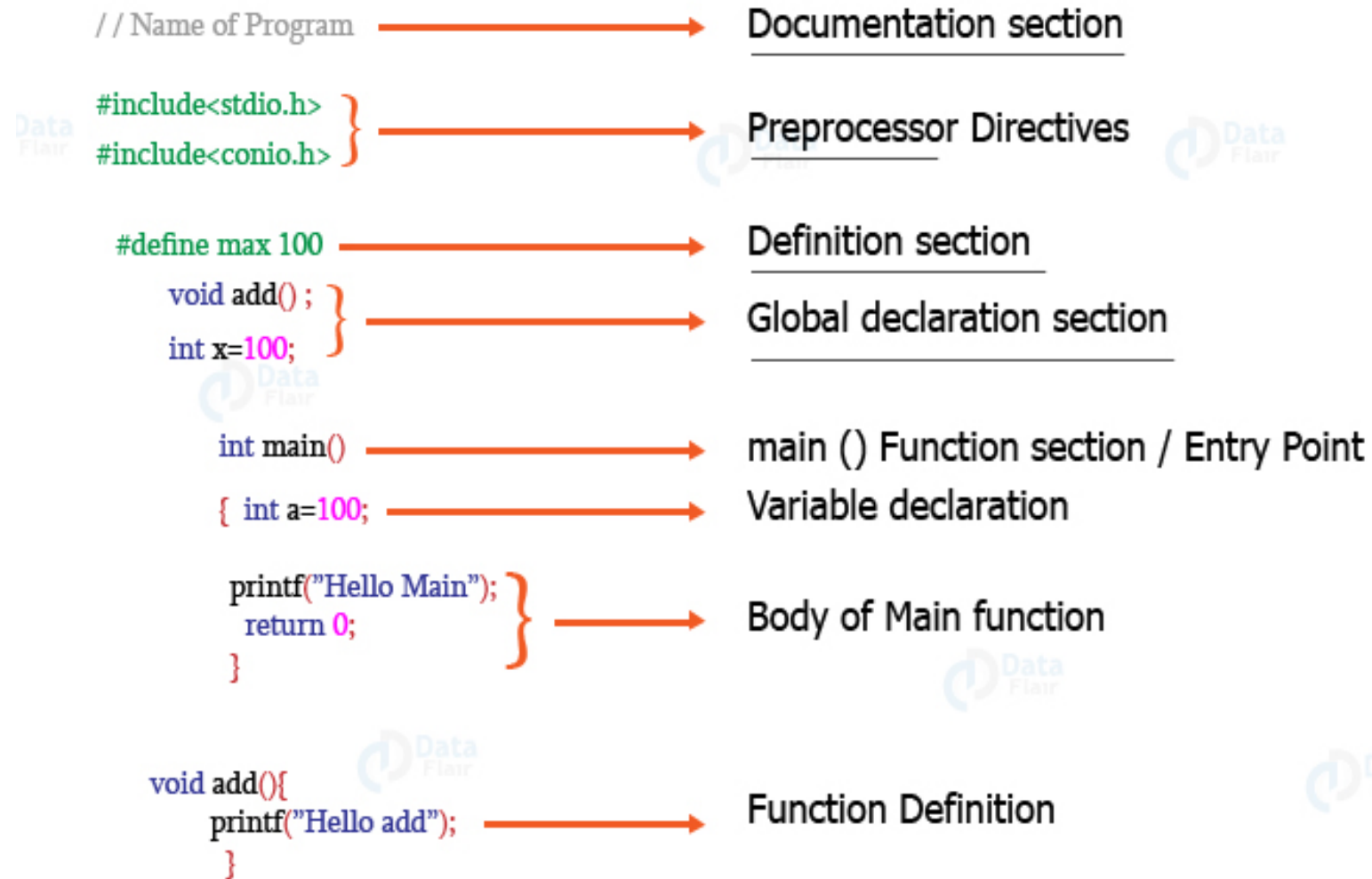
Basic Structure of C Program

The components of the basic structure of a C program consists of 7 parts

1. Document section

2. Preprocessor/link Section

3. Definition section

4. Global declaration section

5. Function declaration section

6. Main function

7. User-defined function section

Basic Structure of C Program

```
// Name of Program          ─────────────▶   Documentation section

#include<stdio.h>    ⎫
                     ⎬     ─────────────▶   Preprocessor Directives
#include<conio.h>    ⎭

#define max 100       ─────────────▶   Definition section

void add() ;    ⎫
                ⎬     ─────────────▶   Global declaration section
int x=100;      ⎭

int main()       ─────────────▶   main () Function section / Entry Point

{  int a=100;    ─────────────▶   Variable declaration

printf("Hello Main");   ⎫
    return 0;           ⎬     ─────────────▶   Body of Main function
}                       ⎭

void add(){
    printf("Hello add");   ─────────────▶   Function Definition
}
```

Basic Structure of C Program

1. Documentation Section
Can give **comments to make the program more interactive**. The compiler won't compile this and hence this portion would not be displayed on the output screen.

2. Preprocessor Directives Section
Involves the use of **header files** that are to included necessarily in the program.

3. Definition Section
Involves the **variable definition and declaration in C**.

4. Global Declaration Section
Used to define the **global variables** to be used in the programs, that means you can use these variables throughout the program.

5. Function Prototype Declaration Section
Gives the information about a function that includes, **the data type or the return type, the parameters passed or the arguments.**

6. Main function
Major section from where the execution of the program begins. The main section involves the **declaration and executable section.**

7. User-defined function section
When you want to define your **function that fulfills a particular requirement**, you can define them in this section.

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