



# **C Programming**

Tutorial for Beginners

**LECTURE -**

**3**





## Basic Concepts

### Keywords (Reserve Words):

The predefined words in C language that are used for specific purpose in C program.

- Every keyword has specific purpose defined the Language developer.
- Keywords must be written in lowercase.
- In C, There are **32 Keywords**
- **Example:**
- int, double, break, while, for etc.

### Identifiers:

An identifier is the name given to the variable, constant, function or a label in C program. It may consists of 31 characters.

#### 1. Standard Identifiers

Predefined identifiers in C language that has some special meaning.

**For example:** `mian()`, `printf()`, `scanf()`

#### 2. User defined identifiers

Identifiers that are defined the user or programmer.

**For example:** variable & function



# Data Types

- Data type describe the type of data that can be used in program.
- It also defines the set of operations on data.

Data Type	Size	Description
<code>int</code>	2 or 4 bytes	Stores whole numbers, without decimals
<code>float</code>	4 bytes	Stores fractional numbers, containing one or more decimals. Sufficient for storing 6-7 decimal digits
<code>double</code>	8 bytes	Stores fractional numbers, containing one or more decimals. Sufficient for storing 15 decimal digits
<code>char</code>	1 byte	Stores a single character/letter/number, or ASCII values



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# Variables

- A variable is a named memory location or memory cell.
- It is used to store program data.
- Value of a variable may change during program execution.

1. Variable Name
2. Variable Content (Value)
3. Variable Address

**marks**

**10**

**0x00100**



## Variables Naming Rules

- Variable name may include letters, numbers and underscore (\_).
- First character must be letter or underscore (\_).
- Blank spaces are not allowed in variable names.
- Both uppercase and lowercase letters can be used.
- Special symbols can not be used in variable name.
- Keywords can not be used a variable name.
- A variable can be up to 31 characters long.
- A variable can be declared only for one data type.





# Variables Declaration

Specifying **variable name** with its **data type** is called **variable declaration**.

```
int marks;  
float average;  
double price;  
char grade;
```



# Variables Initialization

Specifying value to a variable at the time of its declaration is called variable initialization.

```
int marks = 714;  
float average = 85.9;  
double price = 150.75;  
char grade = 'A';
```





# C Programs Examples

Writing C Program variable declaration and initialization  
In this Tutorial, we are using **Dev C++ 5.7.1**

