

A decorative graphic on the left side of the slide. It features a black rectangular area containing several pink flowers of different sizes and styles, some with long stems and leaves. The flowers are arranged in a way that they appear to be growing upwards and outwards from the bottom left corner.

*Welcome!*

We're glad you're here!

Three thin, white, parallel diagonal lines located in the bottom right corner of the slide, extending from the bottom edge towards the right edge.

[illegible]

- + What is program?
  - Set of instructions that you give to a computer so that it will do a particular task.
- + Why we need to learn programming languages?
  - Computers can only understand machine level language (i.e., 0's and 1's binary digits)
- + MACHINE LEVEL LANGUAGE:-
  - It contains only binary digits. It executes faster, but difficult to understand and program by the programmer.

## + HIGH LEVEL LANGUAGE:-

As it is machine independent language it is very easy to program.

They have simple English words as commands therefore easy to understand and program.

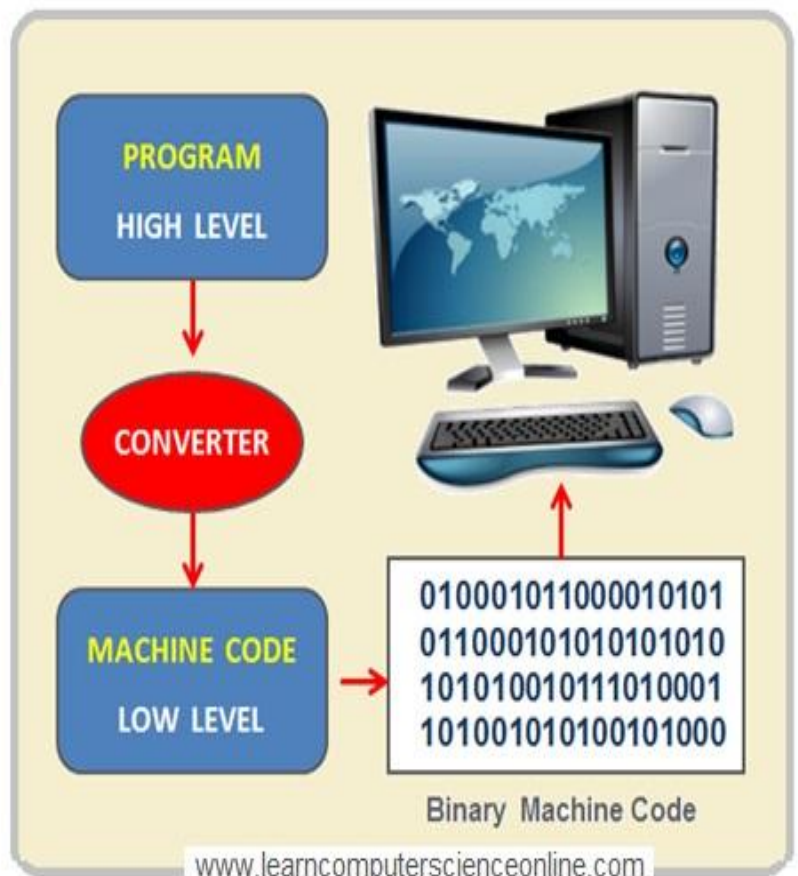
Ex:- C, C++ ,JAVA, PYTHON etc...

+ COMPILER:- It translates HLL to MLL i.e., source code into object code. This process is called compilation.

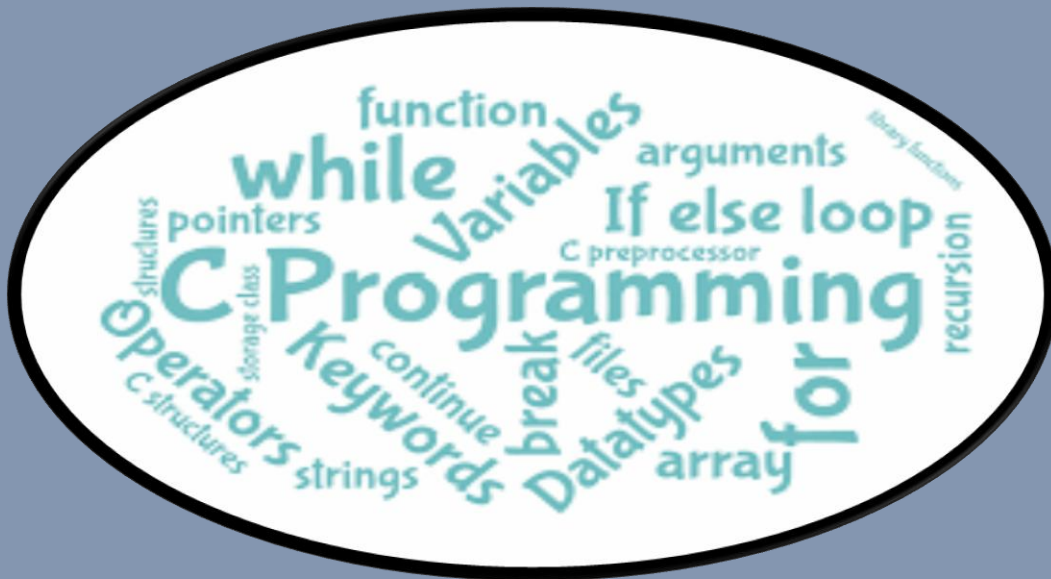
## What is Computer Program ?

### Computer Program :

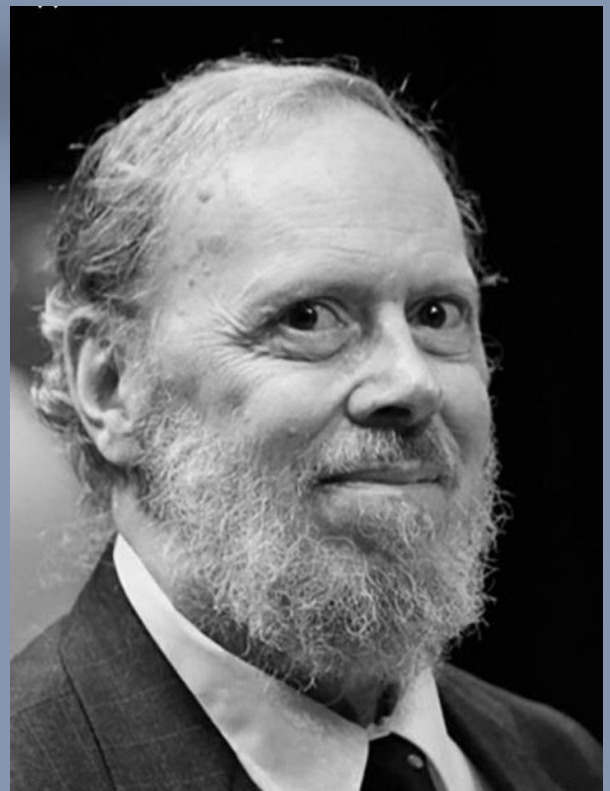
```
int main()
{
    // Variable declaration
    int a, b, sum;
    // Take two numbers as input from the
    user
    scanf("%d %d", &a, &b);
    // Add the numbers and assign the value
    // to some variable
    sum = a + b;
    // Use the calculated value
    printf("%d\n", sum);
    return 0;
    // End of program
}
```




# C PROGRAMMING LANGUAGE .....!



- ♣ C is known as Mother of all programming languages present in the software industry.

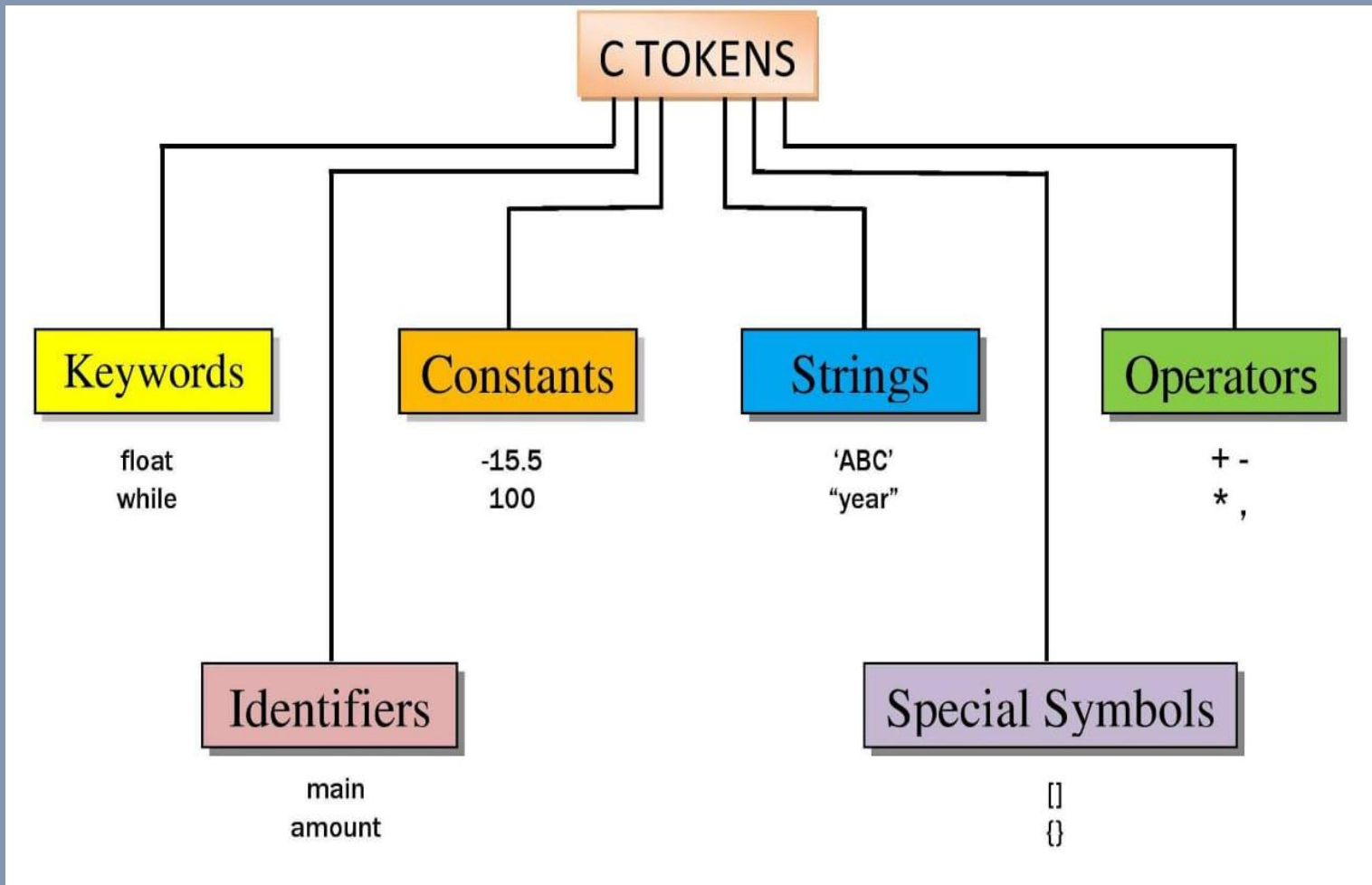


 **History:-** “Dennis Ritchie” the founder of C programming language developed C in the year 1972 at Bell laboratories U.S.A....



## Basics of C:-

- Tokens :- Smallest programming element.



- ❖ KEYWORDS:- The variables which have special meaning and are predefined in the C libraries.
- ❖ IDENTIFIERS:- The name given to the programming element for identification.
- ❖ CONSTANTS:- Fixed value.
- ❖ STRINGS:- Sequence of characters enclosed within the double quotes.
- ❖ SPECIAL CHARACTERS:- These are the symbols that have special built-in meaning.

❖ OPERATORS:- It is a mathematical sign used for the operations.

Ex:-  $a+b$ ,  $a-b$ ,  $a*b$ ,  $a/b$ ,  $a\%b$  (Arithmetic operators)

$i++$ ,  $i--$  (increment/decrement )

$a=10$ ,  $10==10$ ,  $a>b$ ,  $a<b$ ,  $a>=b$ ,  $a<=b$ ,  $a!=2$ (Relational)

$\&\&$ ,  $||$ ,  $!$  (Logical operators)

## Units of Computer Memory Measurements

1 Bit	= Binary Digit
8 Bits	= 1 Byte
1024 Bytes	= 1 KB [Kilo Byte]
1024 KB	= 1 MB [Mega Byte]
1024 MB	= 1 GB [Giga Byte]
1024 GB	= 1 TB [Terra Byte]
1024 TB	= 1 PB [Peta Byte]
1024 PB	= 1 EB [Exa Byte]
1024 EB	= 1 ZB [Zetta Byte]
1024 ZB	= 1 YB [Yotta Byte]
1024 YB	= 1 Bronto Byte
1024 Brontobyte	= 1 Geop Byte

**Geop Byte** is the Highest Memory.

Data Type	Range	Bytes	Format
signed char	-128 to + 127	1	%c
unsigned char	0 to 255	1	%c
short signed int	-32768 to +32767	2	%d
short unsigned int	0 to 65535	2	%u
signed int	-32768 to +32767	2	%d
unsigned int	0 to 65535	2	%u
long signed int	-2147483648 to +2147483647	4	%ld
long unsigned int	0 to 4294967295	4	%lu
float	-3.4e38 to +3.4e38	4	%f
double	-1.7e308 to +1.7e308	8	%lf
long double	-1.7e4932 to +1.7e4932	10	%Lf

Note: The sizes and ranges of int, short and long are compiler dependent. Sizes in this figure are for 16-bit compiler.

### STRUCTURE OF "C" PROGRAM:-

1. HEADER:- A header file is a predefined file with extension .h which contains C function declarations.

Ex:- #include<stdio.h>

#include<math.h>

#include<conio.h>

2. main( ):- Every program must have only one main function. Execution starts from the main function.

3. VARIABLE DECLARATION :- int a=77;

4. BODY:- It contains set of statements.

;  
;→ Statement terminator

5. }:- Indicates end of the program.

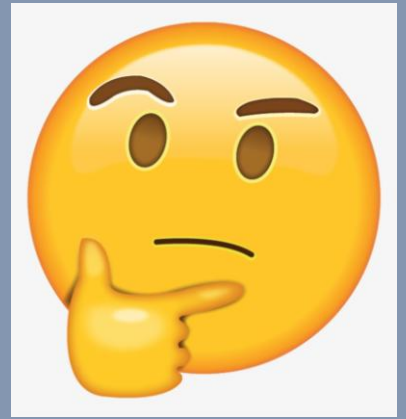
## Structure of C Program

<i>Header</i>	#include <stdio.h>
<i>main()</i>	int main() {
<i>Variable declaration</i>	int a = 10;
<i>Body</i>	printf( "%d ", a );
<i>Return</i>	return 0; }





DO YOU WANT TO SEE  
A COLOURFUL MAGIC  
OF C PROGRAM....!???



## Program:-

```
≡ File Edit Search Run Compile Debug Project Options Window Help
[ ] COLOR.C 4=[ ]
#include<stdio.h>
#include<conio.h>
void main()
{
textbackground(LIGHTMAGENTA);
textcolor(BLUE);
clrscr();
cprintf("Hello ISE...!");
getch();
}
```

1:1

F1 Help F2 Save F3 Open Alt-F9 Compile F9 Make F10 Menu

Output:-

```
Hello ISE...!_
```



Thank You!

