

## C language

### → Introduction :

C is a procedural programming language initially developed by Dennis Ritchie in the year 1972 at Bell Laboratories of AT & T Labs. It was mainly developed as a system programming language to write the UNIX operating system.

### → The main features of the C language include :

- General Purpose and Portable
- Low-level Memory Access
- Fast Speed
- Clean Syntax

These features makes the C language suitable for system or compiler development.

### → Applications of C :

- ① **Operating System:** It is widely used for developing operating system such as Unix, Linux and Windows.
- ② **Embedded System:** It is a popular language for developing embedded system such as microcontrollers, microprocessors, and other electronic devices.
- ③ **System Software:** It is used for developing system software such as device drivers, compilers, and assemblers.



- ④ **Networking:** It is widely used for developing networking applications such as web servers, network protocols and network drivers.
- ⑤ **Database System:** It is used for developing database system such as Oracle, MySQL and PostgreSQL.
- ⑥ **Gaming:** It is often used for developing computer games due to its ability to handle low-level hardware interactions.
- ⑦ **Artificial Intelligence:** It is used for developing AI and ML applications such as Neural networks & deep learning algorithms.
- ⑧ **Financial Application:** It is used for developing financial applications such as stock market & trading system.

### → Structure of C:

1	#include <stdio.h>	→ Header
2	int main ( void )	→ Main
3	{	
4	printf ("Hello World");	→ Statement
5	return 0;	→ Return
6	}	

### → C Commands:

C Basic commands	Explanation
#include <stdio.h>	This command includes standard input output header file (stdio.h) from the C library before compiling a C program.
int main()	It is the main function from where C program executes.

the first way before you can do it you have to go with your  
watercolor without water and when you do it  
will look like this EA you have to do it like this too first  
then you can do it S and then do it like this  
it will look like this EA you have to do it like this too first  
then you can do it S and then do it like this

: ) for example : -

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mom ←	(big) mom ←	2
s ←		3
tumtath ←	("bleat" allison") + tiny	4
water ←	(water)	5

: drawing ) ←

Hello, World!

guitar you will want now. (d. guitar) etc.  
drawing 3 o

Every morning I wake up and eat breakfast with Omega tri

{	Indicates the beginning of the main function.
/* some_comments */	Whatever written inside this command /* */ inside a C program, it will not be considered for compilation and execution.
print ("Hello World");	This command prints the output on the screen.
getch();	This command is used for any character input from keyboard.
return 0;	This command is used to terminate a C program and it returns 0.
}	It is used to indicate the end of main function.

## Program 1

Q) Write a program in C to print simple message "HELLO WORLD".

```
#include <stdio.h>
#include <conio.h>
int main ()
{
    printf ("HELLO WORLD");
    return 0;
}
```

Enter two integers: 12

11

$12 + 11 = 23$



## Program 2

(\*) Write a program in C which performs addition of two numbers and

```
# include <stdio.h>
# include <conio.h>
int main()
{
    int number 1;
    int number 2;
    printf("ENTER THE 1st NUMBER : ");
    scanf("%d", &number 1);
    printf("ENTER THE 2nd NUMBER: ");
    scanf("%d", &number 2);
    int sum = number 1 + number 2;
    printf("Sum of TWO NUMBERS IS: %d", sum);
    return 0;
}
```

E marginal

E marginal

lets withdraw out for withdraw swap of strike. So changing a strike for

E marginal

Enter first number: 1.20

Enter second number: 2.45

After swapping, first number = 2.45

After swapping, second number = 1.20

E marginal

Older we give return out-focus at E marginal or strike (if)



## Program 3

Q★) Write a program in C to swap 2 numbers using 3rd. Variable.

```
#include <stdio.h>
#include <conio.h>
int main () {
    clrscr ();
    int x, y, temp;
    printf ("Enter the value of x and y ");
    scanf ("%d %d", &x, &y);
    temp = x;
    x = y;
    y = temp;
    printf ("The value after swap is x=%d & y=%d", x, y);
    return 0;
}
```