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# DEPARTMENT OF AIML

# DBLEM SOLVING AND C PROGRAMMING

I YEAR - I SEM

UNIT 2 – C Programming Basics

Introduction to C Programming & Fundamental Rules

originally developed in the 1970s, by Dennis Ritchie at Bell Labo

ligh level, general – purpose structured programming language.

rs software developers to develop programs without worrying as where they will be implemented.

ted by American National Standards Institute (ANSI) & Intecation (ISO).

bs developed C language based on "Basic Combined Program.

ions of C consists of terms that are very closely same to algebra

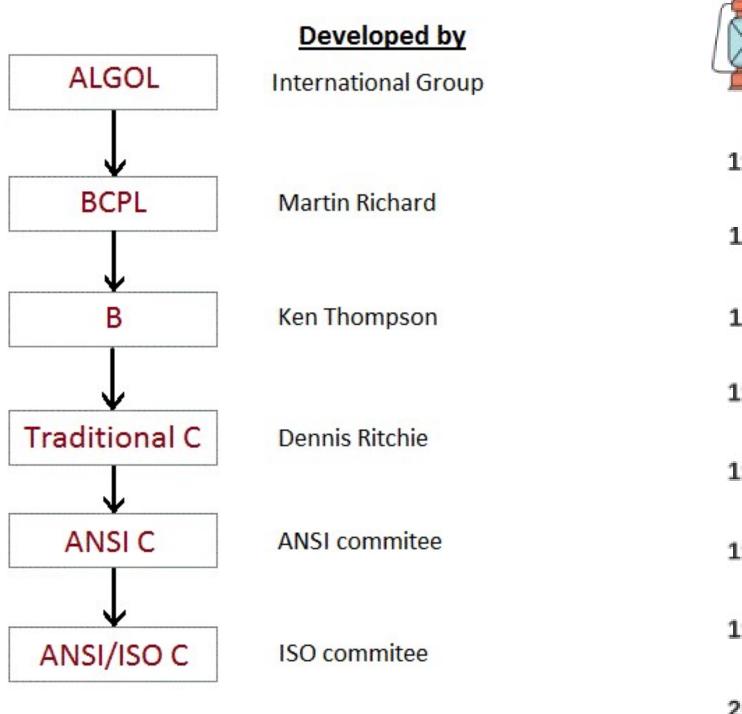
ng of certain **English keywords** such as if, else, for ,do and while.

ins certain additional features that allows it to be used at a lowe between machine language and the high level languages.

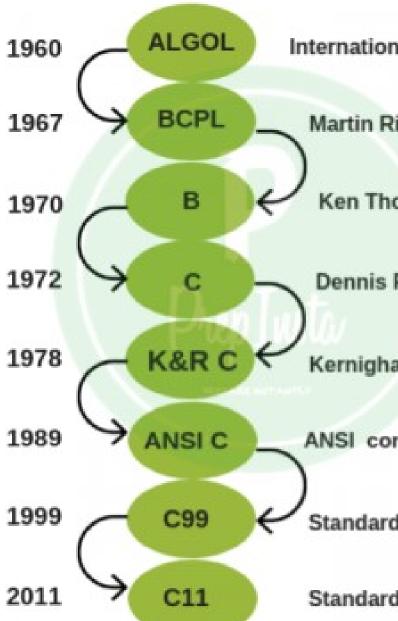
lows C to be used for **system programming** as well as

orts Both the low-level and High-Level programming features.

nming







### **UAGE: (STRONG)**

ist language, whose **rich set of built-in functions** and operators can be used to write any complex prograi

### D FAST:

written in C are efficient and fast.

to its variety of data types and powerful operators.

#### **TIONS**

only 32 keywords in ANSI C and its strength lies in its built-in functions.

indard functions are available which can be used for developing programs.

portable.

s that C programs written for one computer can be run on another with little or no modification.

### **PROGRAMMING:**

e is well suited for structured programming, thus requiring the user to think of a problem in terms of funct ollection of these modules would make a complete program.

lular structure" makes program debugging, testing and maintenance easier.

#### **TEND:**

aportant feature of C is its ability to extend itself.

am is basically a collection of functions that are supported by the C library.

- ments must end with semi colon (;)
- (;) acts as a terminator.
- <u>ensitive</u> i.e., upper case and lower case characters are dif
- the statements are typed in lower case.
- ments can be written in one line or it can split into multiple st always match upon pairs i.e., every opening brace losing brace ({...})
- ogram must contain a Main() function
- can not be nested. Example (/\* welcome to c/\*programmes can be included between two words to improve the readles must be declared in the declaration section before they

```
main()
{
   /*.....printing begins.....*/
   printf("I see, I remember");
   /*.....printing ends.....*/
}
```

- e informs the system that the execution begins at this line.
- is a special function used by the C system to tell the computer wh

## am must have exactly one main function.

ore than one main function, the compiler cannot understand which the program.

- brace "{ " in the second line marks the beginning of the function e "}" in the last line indicates the end of the function.
- ginning with /\* and ending with \*/ are known as **comment lines**.
- nes are not executable statements and therefore anything between

```
main()
{
  /*.....printing begins.....*/
  printf("I see, I remember");
  /*.....printing ends.....*/
}
```

) function is the only executable statement of the program. printf("I see, I remember");

redefined standard C function for printing output.

neans that it is a function that has already been written and compiln our program at the time of linking.

unction causes everything between the starting and the ending quout.

the output will be:

I see, I remember

```
main()
{
  /*.....printing begins.....*/
  printf("I see, I remember");
  /*.....printing ends.....*/
}
```

fferent forms of main statement. Following forms are allowed.

n()
ain()
a(void)
d void means that the function does not return any information to

ed int means that the function returns an integer value to the operation of the last statement in the program must be "return 0".

```
#include<stdio.h>
#include<conio.h>
void main() ← main() Function Must Be There

{
    clrscr();
    printf("Welcome to DataFlair");

Single Line Comment

Office Comment

Office Comment

Office Comment

Program Enclosed Within Curly Braces
```

- e states the inclusion of Header files.
- **nin()** is a special function used by the C system to tell the comput ts and returns no value.
- am must have exactly one main function.
- ore than one main function, the compiler cannot understand which
- the program.
- brace "{" in the fourth line marks the beginning of the function in the last line indicates the and of the function.
- e "}" in the last line indicates the end of the function.

```
#include<stdio.h>
#include<conio.h>
void main() 	— main() Function Must Be There

{
    clrscr();
    printf("Welcome to DataFlair");

Single Line Comment

Office Comment

Program Enclosed Within Curly Braces
```

ginning with // are known as comment lines (Second Type of Comnes are not executable statements and therefore anything starting viler.

esents getting the character from processing.

esents clear screen indication, which processes with clearing the escriptive screen.

end with Semicolon (;)