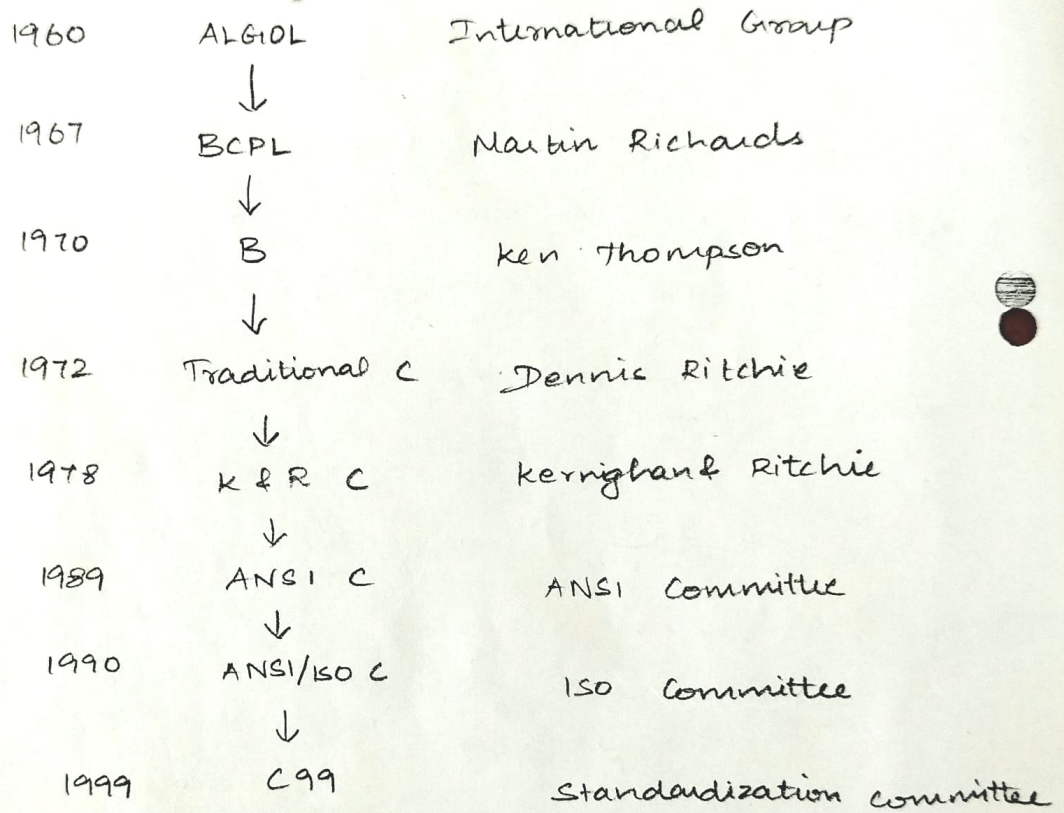


## C PROGRAMMING BASICS.

## History of C.

- \* Structured, high-level, machine-independent language.
- \* Root of modern languages is ALGOL (1960, First computer language to use block structure). <sup>also old form</sup> ↓ used in Europe Block  
structured programming.
- \* 1967 - Martin Richards developed a lang. BCPL (Basic Combined Programming lang) primarily for writing OS.
- \* 1970 - Ken Thompson created a language with features of BCPL called B.
- \* B - used to create early version of UNIX OS @ Bell lab
- \* B & BCPL - "Typeless" system programming languages.
- \* Dennis Ritchie (ALGOL, BCPL, B) 1972 ← C language  
@ Bell lab
- \* C uses many concepts from these languages & added up datatypes other powerful concepts.
- \* UNIX is associated with C. C is used in academic environments, it runs under variety of operating sys & H/W platforms.
- \* 1979, C is evolved into "traditional C".
- \* 'The C programming language' book - Dennis Ritchie & Brian Kernighan  
K&R C (1978).
- \* 1983 - American National Standards Institute (ANSI) appointed a technical committee to define a standard for C.  
It was approved in Dec 1989. C89  
approved by ISO in 1990.

- \* C++ added new features to C - to make it a Versatile and object-oriented language.
- \* During this period Sun Microsystems of USA created a new lang Java
- \* All languages are Dynamic in Nature.



### Importance of C

- \* Robust
- \* Built-in functions & operators - complex pgm.
- \* C compiler - capability of Assembly language

+

Features of high-level lang

↓

Suited for writing both ss & business package.

-x pgms in C - Efficient & fast [Datatypes + operators]

\* Faster than BASIC.

Ex: Increment a Variable  
0 - 15000 take 1 sec in C  
0 - 15000 take more than 50 sec in BASIC (Interpreter)

- \* 32 keywords in C, Built-in functions
- \* Highly portable - C pgm written in one computer can run on another with little/no modification
- \* Structured programming. - function modules.
- \* Extends itself. C is a collection of function supported by library

Example programs.

```
#include <stdio.h>
#include <conio.h>
main()
{
  /* printing */
  printf("C programming");
}
```

C pgm is divided into modules/ functions.

functions are written by user, stored in C library.

Library fn are grouped category-wise and stored in different files known as header files.

```
#include <filename>
```

Preprocessor directive.