


Shoukat Malik B.S Software Engineering SSUET Karachi



# INTRODUCTION TO C PROGRAMMING



- 
- A dark grey arrow pointing right, with several thin, curved lines extending from its base across the left side of the slide.
- ➔ Why C language
  - ➔ History to C programming Language
  - ➔ Feature of C - Language
  - ➔

C

Programming

# History of C Programming

C

Programming

1960 ALGOL -60

1963 CPL

International Groups

Cambridge University

1967

BCPL

1969

B

Martin Richards

Ken Thompson

Type less Language

Bell Labs

1972

C

Dennis Ritchie

Type base language

It was developed to overcome the problems of previous languages such as B, BCPL etc.



# C Language Standard

1989 ANSI American National Standard Institute or C - 89

1990 ISO International Organization for Standardization or C - 90 .

1995 ISO C-95.

1999 ISO C-99

December 2011 C-11

# Features of C Language

## Low Level Features :

- ❑ C Programming provides [low level features](#) that are generally provided by the Lower level languages. C is Closely Related to Lower level Language such as **“Assembly Language”**.
- ❑ It is easier to [write assembly language codes in C programming](#).





## Portability :

- ❑ C Programs are portable i.e. they can be run on any Compiler with Little or no Modification
- ❑ Compiler and Preprocessor make it Possible for C Program to run it on Different PC

## Powerful

- ❑ Provides Wide verity of '**Data Types**'
- ❑ Provides Wide verity of '**Functions**'
- ❑ Provides useful Control & Loop Control Statements




## High Level Features :

- ❑ It is more User friendly as compare to Previous languages. Previous languages such as BCPL, Pascal and other programming languages never provide such great features to manage data.
- ❑ Previous languages have there **pros and cons** but C Programming collected all useful features of previous languages thus C become **more effective language**
- A C program is basically a collection of functions that are supported by C library. We can also create our own function and add it to C library.
- C language is the most widely used language in operating systems and embedded system development today





## Bit Manipulation

- ❑ It provides wide variety of bit manipulation Operators. We have bitwise operators to manage Data at bit level.
- 





## Different parts of C program.

- Pre-processor
- Header file
- Function
- Variables
- expression
- Comment
- All these are essential parts of a C language program.

## Pre-processor

The main work of pre-processor is to initialize the environment of program, i.e. to link the program with the header file. .e.g. **#include**

## Header file

Header file is a collection of built-in functions

To use any of the standard functions, the appropriate header file must be included

Example : <stdio.h ><conio.h >, <math.h >,<string.h >

## main() function

**main()** function is a function that must be used in every C program.

A function is a sequence of statement required to perform a specific task. **main()** function starts the execution of C program.

## Variables

Variable is the name of memory location

