



# The Future Programmer Coding Classes

**WELCOME CODERS !!**

# C & C++ Programming Language

( Lecture 1 )

Introduction to Computers  
&

Introduction to Programming languages



# What is “Computer”?

- The word **compute** is derived from the **Latin** word ‘computare’, was meaning “**arithmetic, accounting**”.
- The *Computer meaning* is the digital device that stores information in memory using input devices and manipulate information to produce output according to given instructions.



- The actual machinery, the physical parts of a computer system refer to as **Computer hardware**; the instruction (a **program**) that tells the computer what to do or how to do, that is called **Computer software** (often called just **software**).
- Technically, a computer means to calculate or electronic programmable machine.
- Computer understands only **Binary language or Machine language** and it is called language of 0's and 1's.



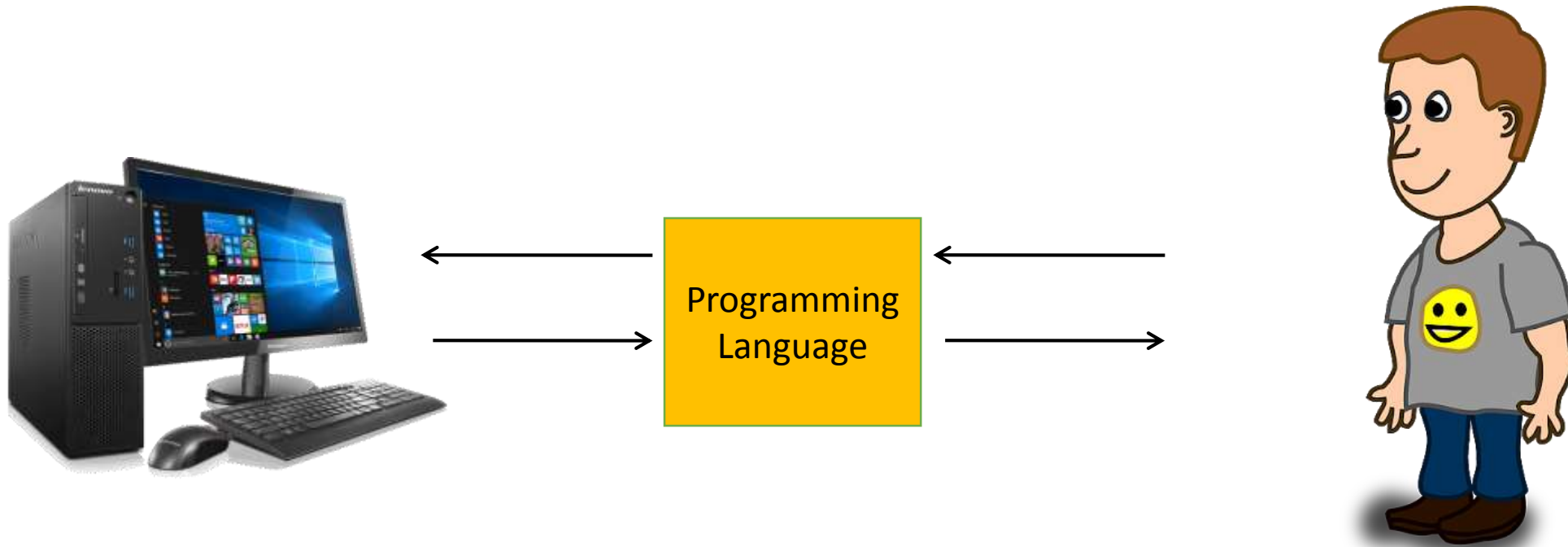
- It is very difficult for us to understand **the binary language** as humans.
- Also, it will be more difficult for computers to understand the human **friendly languages** like Hindi, English, French etc.
- So, complete the **communication** between humans and computers we need some translators that is called Programming languages.



# What is “Programming Language”?

- Programming Languages are the **Translators** in the process of communication between computers and humans.
- Programming Languages are very useful in translating the binary code to the human friendly languages and also they translates the human friendly languages to the binary languages .





# Why we should learn any programming language ?

We **require them because** , it is very difficult for humans to speak in **terms 0s and 1s** and it will **be impossible** for computer to **speak Hindi or English**. Thus in order to **communicate with a machine** it is important there should be some mechanism which can translate human language to machine language and vice versa.

This translation is done by programming language.





**Question . :** Do you know how many languages are there **in the world ?**

**Answer :** More than **900 languages** in the world.

**Question .:** If there are so many languages then why we are starting our programming Journey with C language.

**Answer :** 'C' is a **base language** for many programming languages. So, learning 'C' as the main language will play an important role while studying other programming languages.

It shares the same concepts such as **data types**, **operators**, **control statements** and many more.



# History of “C” Language

- Who Created C language ?
  1. Dennis Ritchie (Father Of C)
  2. Brian Kernighan
- Where C language was Developed ?

AT&T ( American Telephone and Telegraph) in Bell Labs USA.



# History of “C” Language

- When was C Developed ?

In 1972

- Why C language Called C ?

The base or father of programming languages 'ALGOL'.

It was first introduced in 1960.

'ALGOL' was used on a large basis in European countries.

'ALGOL' introduced the concept of structured programming to the developer community.



# History of “C” Language

- In 1967, a new computer programming language was announced called as 'BCPL' which stands for Basic Combined Programming Language.
- Just after three years, in 1970 a new programming language called 'B' was introduced by Ken Thompson that contained multiple features of 'BCPL.' This
- This programming language was created using UNIX operating system at AT&T and Bell Laboratories.



# History of “C” Language

- Both the 'BCPL' and 'B' were **system programming** languages.
- 'C' **programming language** contains all the features of these languages and **many more additional concepts** that make it **unique** from other languages.



# History of “C” Language

**ALGOL 1960** 


**BCPL 1967** 

**B 1970** 

**C 1972** 

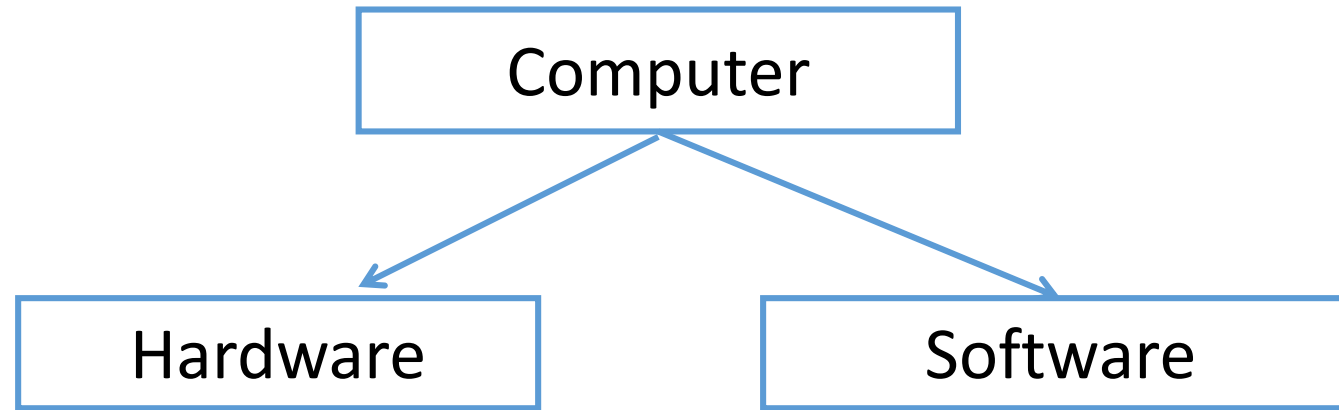
**K&R C 1978** 

**ANSI C 1989** 

**ANSI/ISO C 1990** 



**Question .:** Why is **C** so popular even after **51 years** have passed ?

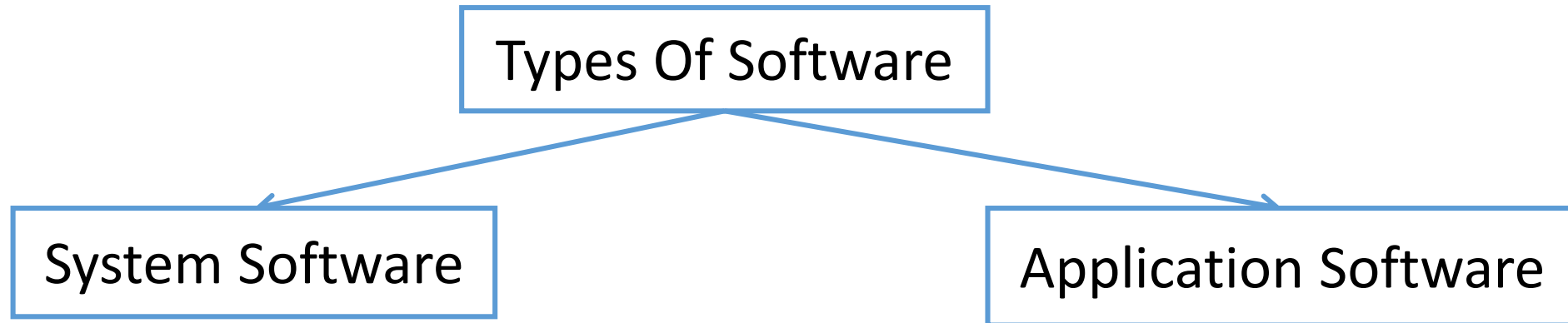


These are devices attached to the computer like keyboard, monitor, RAM, HDD etc.

These are instructions on which a particular device operates



# Types of Software's



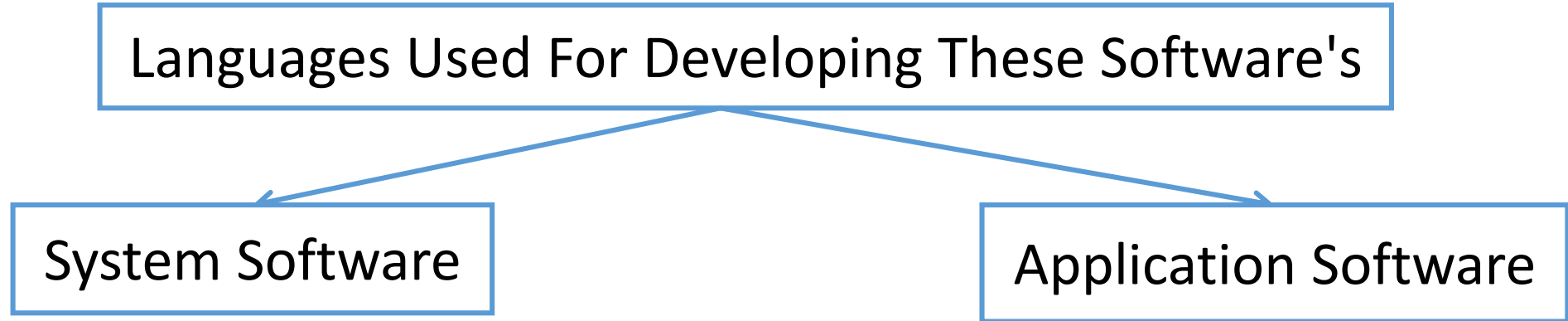
Important for controlling the overall functioning of the machine like OS.

Important for a particular task like WhatsApp us used for chatting, Truecaller is used for getting called info, PUBG is used for playing online game





# Languages used for developing “Software's”



The most popular and only option Available in early 1960s was ASSEMBLY LANGUAGE

Language like Pascal, Cobol, Fortran were user for developing application software like mathematical software, calculators etc



# What is the strength of C Programming Language?

- When C language came in the market, it became the most versatile language for developing both system software and application software.



Thus we can say that is an **ALLROUNDER language**

## System Software Developed In C

- Unix and Linux
- Mac OSX and windows
- Android

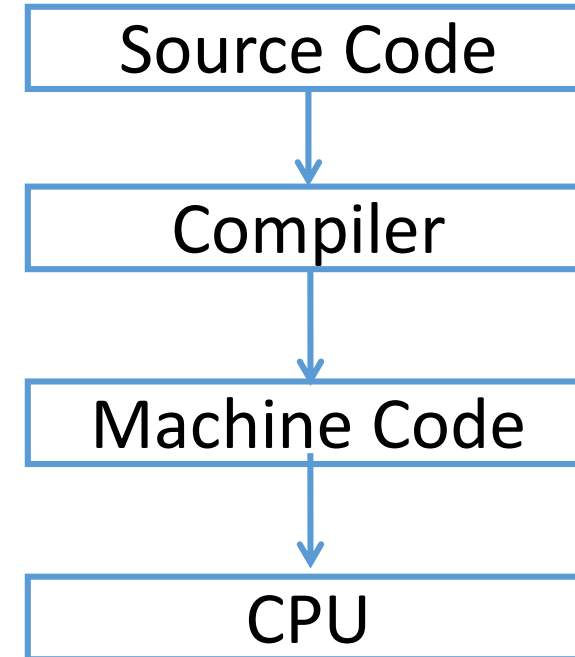
## Application Software Developed In C

Almost every popular programming language is designed in C like: Java, Python, PHP



# Steps Required For Developing A Program

- Writing the “SOURCE CODE”
- **Compilation** Of The Source Code
- **Execution** Of The Machine Code



## ❑ Translators

1. **Compiler**    **C, C++**
2. **Interpreter**    **PHP**
3. **Assembler**    **Assembly Language**



What is IDE and what it dose ?

IDE stands for:

**ITEGRA**TED : Together, all thing present in the same software

**DEVELOPMENT** : Programming

**ENVIRONMENT** : Software, Tool

This means that using an IDE we can write, compile as well as run a program



## Popular IDE of C

IDE	Company
Turbo C	Borland
Code Blocks	Various
Dev C++	Bloodshed
VS Code	Microsoft
X-Code	Apple





**THANK YOU !!**

