

# Chapter - 1

## What is C++

# History of C++

B.C. Early languages such as FORTRAN, COBOL, ALGOL, PL/I and others.

1970 Brian Kernigham and Dennis Ritchie invent C. The language they used for inspiration was called “B”

1980 Bjarne Stroustrup creates “C with Classes.”

1995 The ANSI Committee releases their draft of the C++ Standard.

1998 An official C++ standard is adopted.

(This is the day that C++ started to become obsolete.)

# How C++ Works

Programs are written by humans.

Programs are run on computers.

C++ programs are written by humans and translates into machine language by the C++ compiler.

**C++ Programmer**

```
// Compute the area
// of a triangle
area =
    (base * height) /
        2.0;
```

**C++ Compiler**



**Machine Language**

```
0010 1101
1101 1000
1001 1000
0001 0010
0010 0000
```

# C++ View of the World

Traditional programming languages view of the world (computer):

Data  
Code

C++ adds:

Class  
(data and the instructions that operate them).

# How to write a program

*Good organization is key to writing good programs*

Steps to writing a program:

Step 1. Think! (This is not optional.)

Step 2. Organize your thoughts

Step 3. Write them down in English

Step 4. Translate them into C++

# How to learn to Program

## *Write Programs:*

There is no better teacher than experience.

Working till 2:00 in the morning on a program only to find that you typed "==" instead of "=" is a great learning experience.

## *Comment.*

- Always comment your programs, even if you are writing them for yourself.
- Comments help you organize your thoughts.
- Comments help you remember what you did.
- Comments help the programmer who comes after you understand what you did.