

INTRODUCTION TO C++

The journey of
a thousand miles
begins with a
single step.

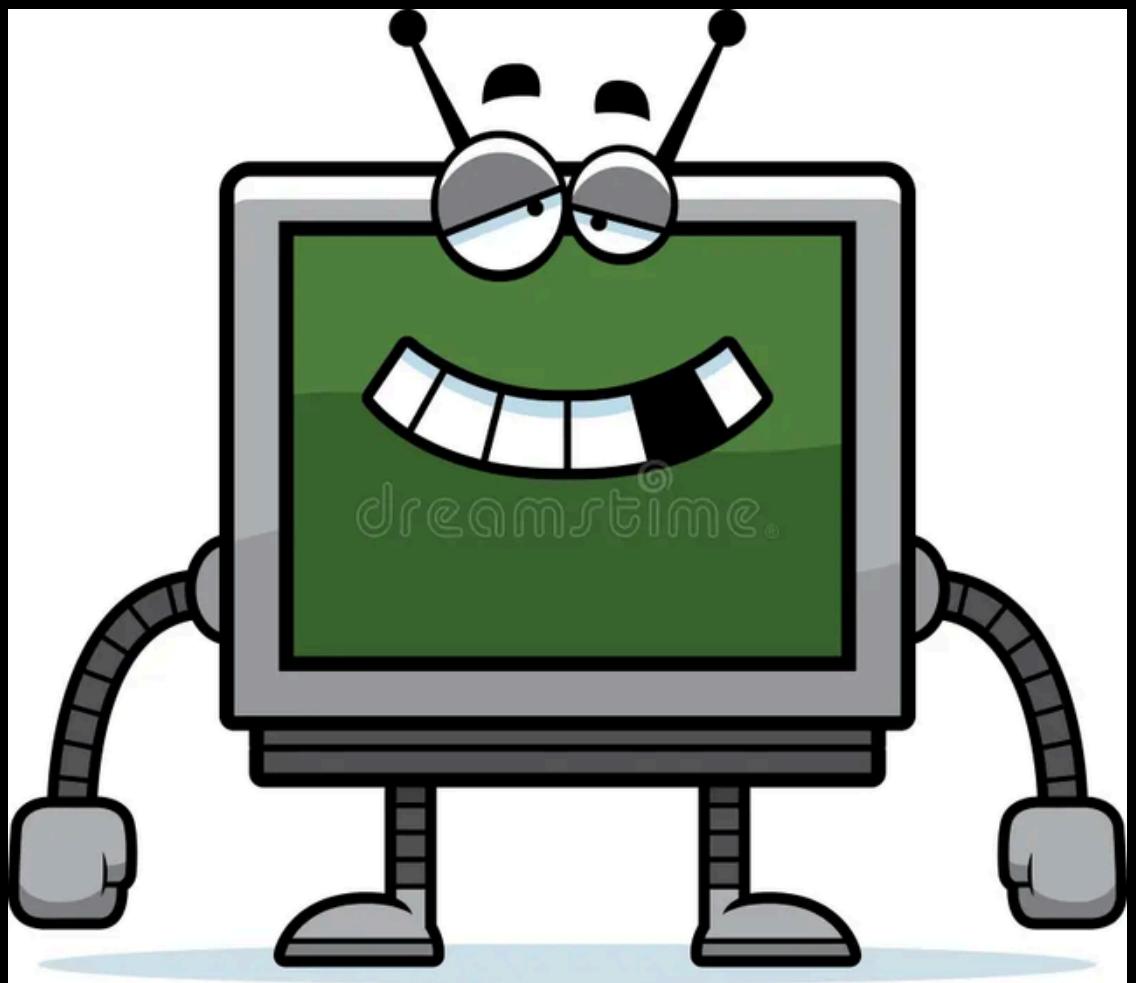
~Lao Tzu

PLAN FOR TODAY

- How computers think?
- Why programming languages exist?
- Writing our first C++ code
- Rules of printing
- Data types & operators
- Taking input
- Making decisions (if-else)
- Assignments walkthrough



WHAT IS PROGRAMMING?



WHY PROGRAMMING LANGUAGES EXIST?



IDE & IMPORTANCE OF SYNTAX



FIRST C++ CODE (HELLO WORLD)

```
1 #include<bits/stdc++.h>
2 using namespace std;
3
4 int main()
5 {
6     cout << "Hello world";
7 }
```

SOME IMPORTANT RULES TO REMEMBER

- Semicolon: Every statement must end with ;
- Case Sensitive: cout will work, but COUt will not.
- Printing Text: Text must be inside double quotes.
- New Line: For a new line, use endl.
- Brackets Come in Pairs

ARITHMETIC OPERATORS

Operator	Meaning
+	Add
-	Subtract
*	Multiply
/	Divide
%	Remainder

VARIABLES

A variable is a named box in the computer's memory where we store some data.

DATA TYPES (FOUNDATION)

Type	Use
int	Whole numbers
long long	Big numbers
double	Decimal
char	Single character
bool	true / false

SOME IMPORTANT RULES TO REMEMBER

- Variable must be declared before use
- No spaces in variable names
- Case sensitive: marks ≠ Marks
- Name should be meaningful (not x1, a2 everywhere)

TAKING INPUT

RELATIONAL OPERATORS

Operator	Meaning	Example	Result
>	Greater than	5 > 3	true
<	Less than	5 < 3	false
>=	Greater than or equal to	5 >= 5	true
<=	Less than or equal to	4 <= 3	false
==	Equal to	5 == 5	true
!=	Not equal to	5 != 3	true

LOGICAL OPERATORS

CONDITIONALS

