Programming in C (28567)

Mst. Kamrun Nesa

Instructor(tech/computer)

Bogura Polytechnic Institute

Programming

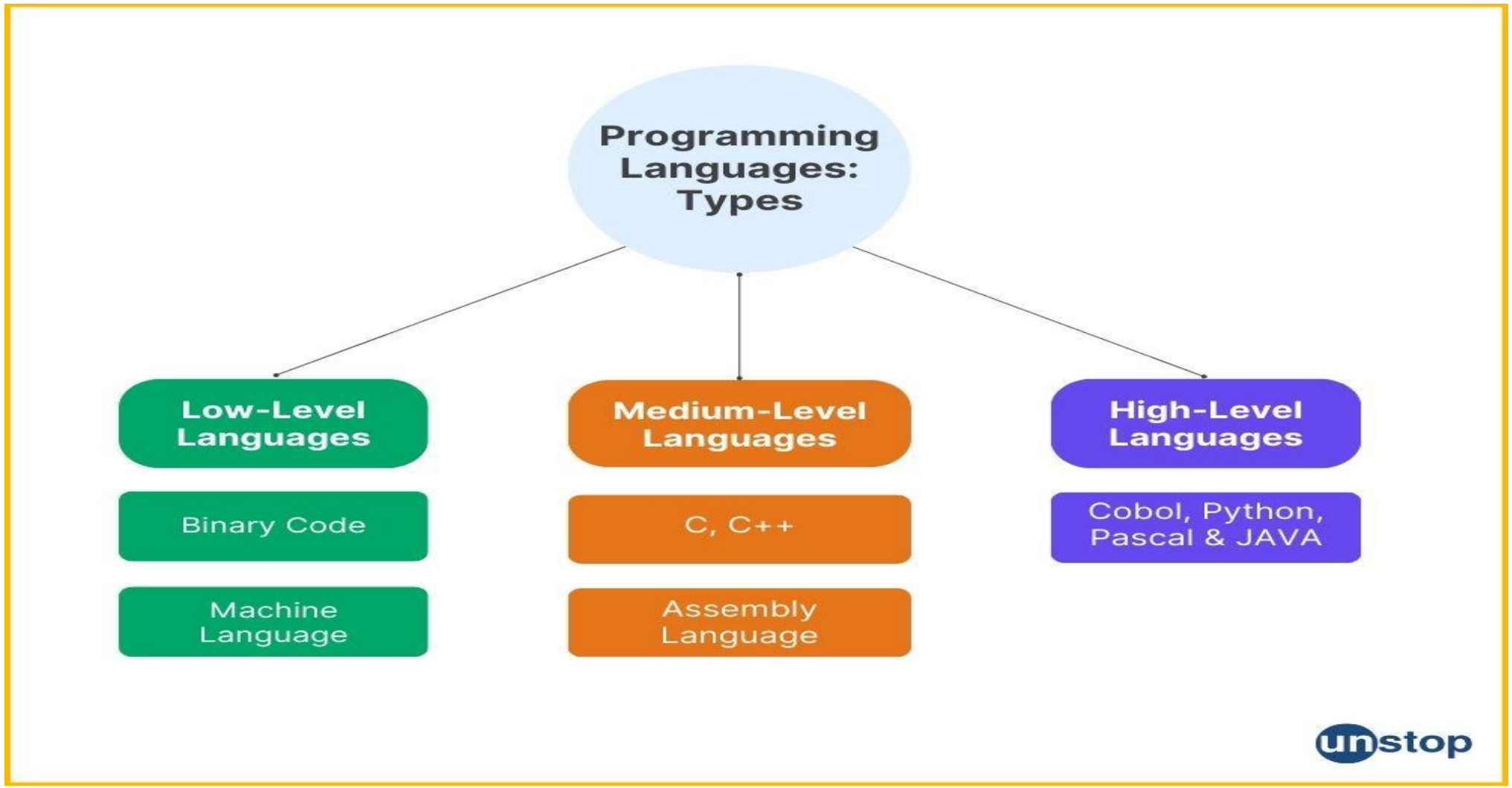
- Programming is the process of creating a set of instructions, or code, that tells a computer what to do to solve a problem or perform a task.

Programming Language

- A programming language is a formal system of words and symbols used to instruct a computer to perform specific tasks, acting as a way for humans to communicate with machines.

Example:

Types of Programming Language



Translator Program

- A language translator is a computer program that converts programming instructions from one language to another. It can also convert instructions to machine code, which computers can understand and run.

High-level language

Machine code

Easy for programmer to understand

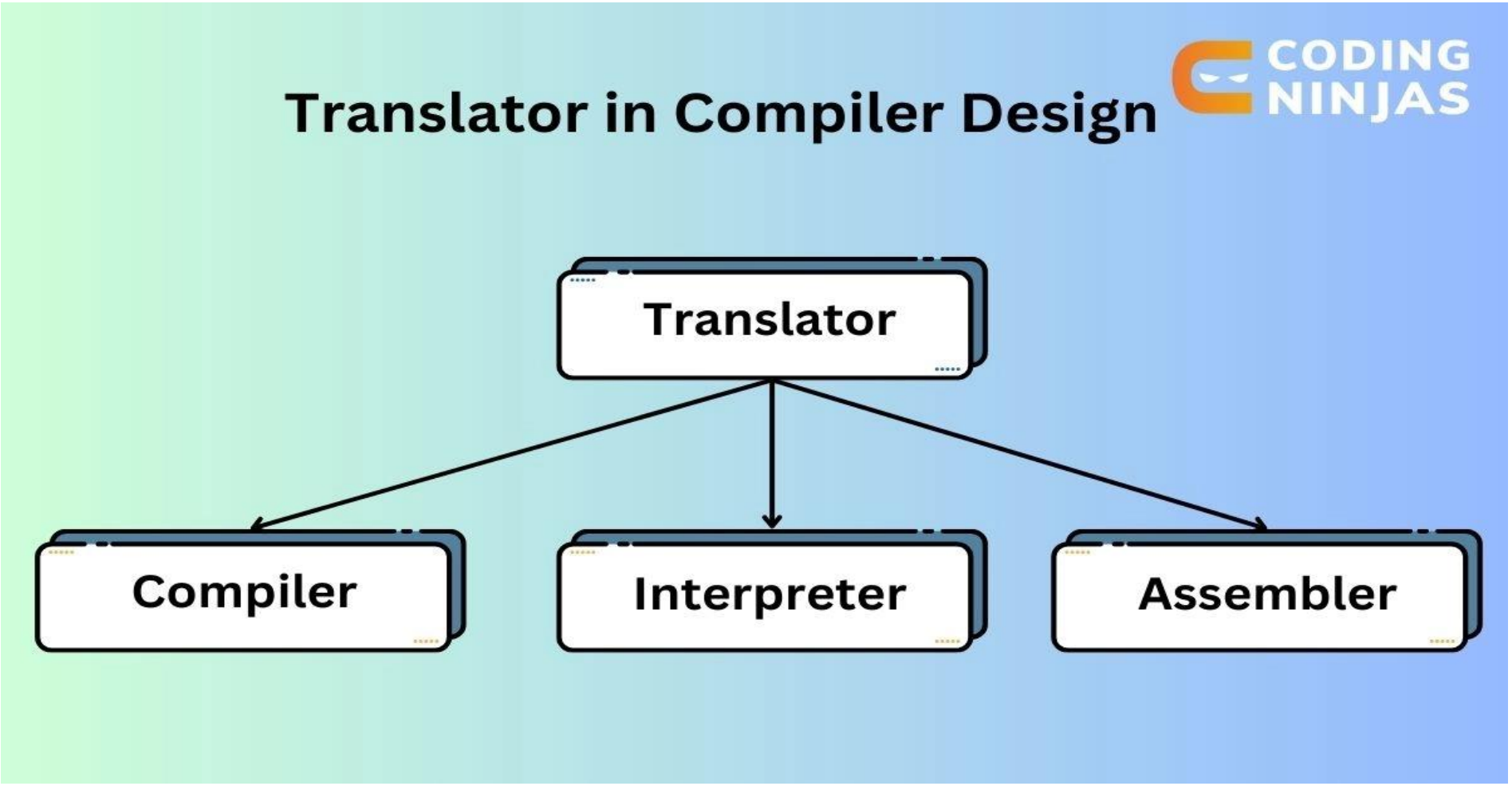
Contains words from natural language

Translator program

The computer's own language

Binary numbers
All 1s and 0s

Types of Translator

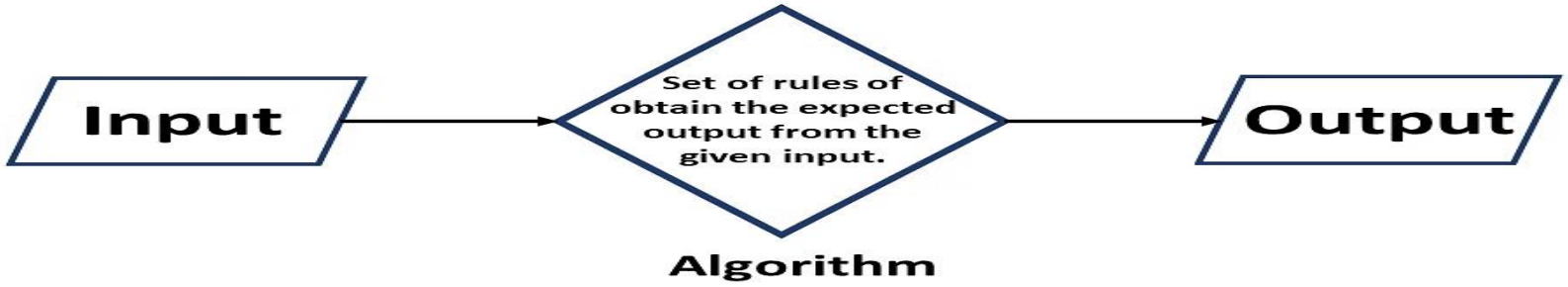


Difference between Compiler & Interpreter

Compiler	Interpreter
• A compiler takes the entire program in one go.	• An interpreter takes a single line of code at a time.
• The compiler generates an intermediate machine code.	• The interpreter never produces any intermediate machine code.
• The compiler is best suited for the production environment.	• An interpreter is best suited for a software development environment.
• The compiler is used by programming languages such as C, C ++, C #, Scala, Java, etc.	• An interpreter is used by programming languages such as Python, PHP, Perl, Ruby, etc.

Algorithm

- In programming, an algorithm is a step-by-step set of instructions that a computer follows to solve a problem or perform a task. It defines what the computer needs to do and how it should do it.



Step 1: Start

Step 2: Create a variable to receive the user's email address

Step 3: Clear the variable in case it's not empty

Step 4: Ask the user for an email address

Step 5: Store the response in the variable

Step 6: Check the stored response to see if it is a valid email address

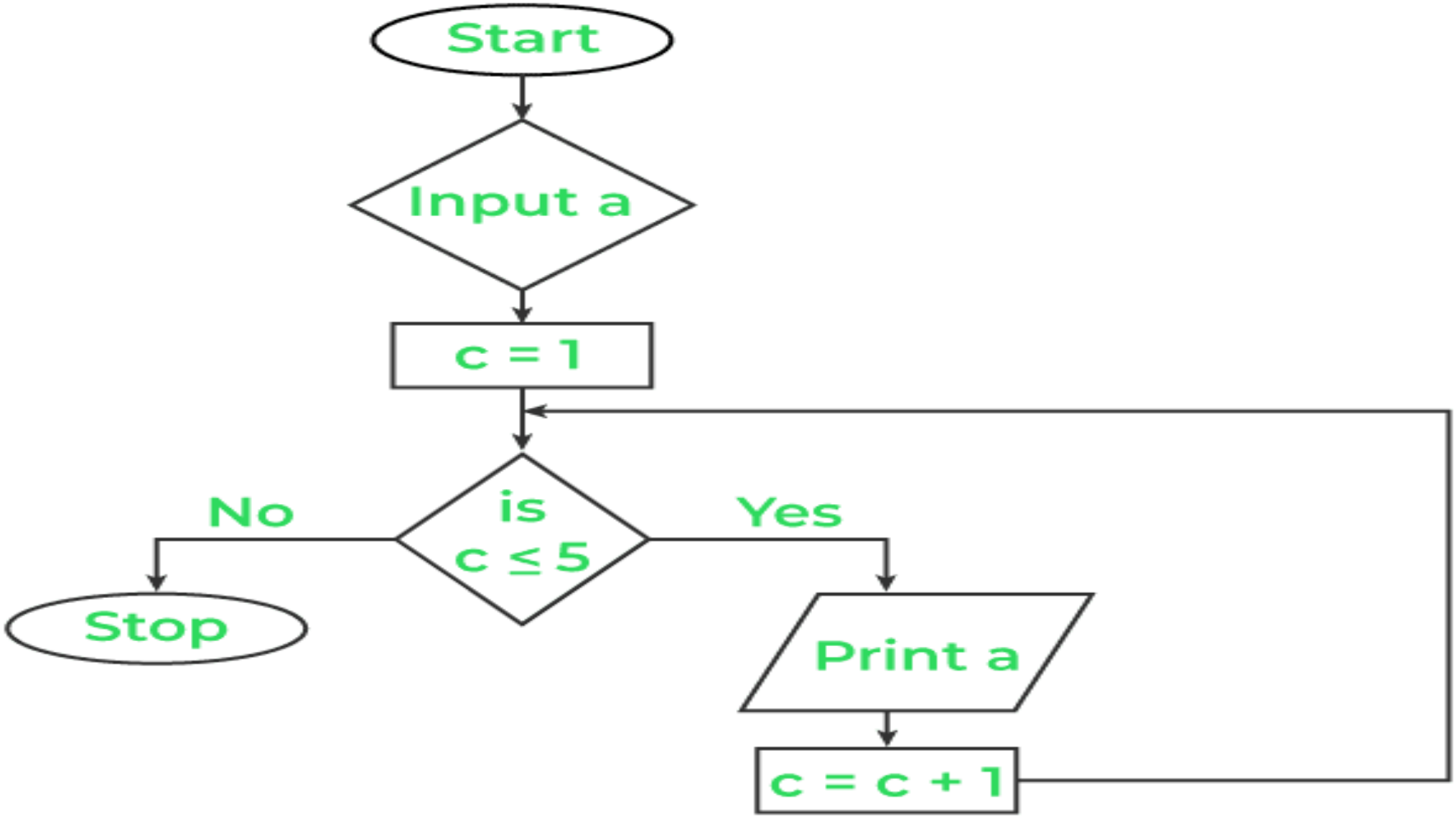
Step 7: Not valid? Go back to Step 3.

Step 8: End

Flowchart

- In programming, a flowchart is a visual representation of an algorithm or process, using shapes and arrows to illustrate the steps and flow of data or control.

- It helps programmers understand and plan the logic of a program before writing code.


Start
Input a
c = 1
is
c ≤ 5
No
Yes
Stop
Print a
c = c + 1

01010100 01101000 01100001
01101110 01101011 00100000
01111001 01101111 01110101

(Thank you!)