

# **Practice of Information Processing**

(IMACU)

## **First lecture (part 2): preface**

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# Why do we learn C now?

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- We = Engineers, Programmers, Researchers
- The C programming language
  - has a long history. Still used now.
  - One of the most **difficult** language.
  - Closer to **machine language**. You must give precise instructions.
  - **Fast** execution speed.
- The recently popular Python language (used for AI and data analysis) is easier to learn and write.
  - The program code is short and compact.
  - Closer to natural language.
- Nowadays, Chat GPT understands natural language.

- C/C++ is used in
  - Operating System (OS)
  - Internet browser, Web server
  - Robot control, Firmware, Hardware Driver
  - Game programming, CG
- C is suitable for programs that require **heavy or fast** processing.
- **If you have acquired C, you can easily acquire other programming languages.**
- **No matter what language you use, It is important to construct algorithm and know how computers work.**

## ■ C language basics

- Variables and data types
- How to use the `printf` function

## ■ From human thinking to computer programs

- Three basic forms of processing flow
- “Sequence”, “Selection”, “Iteration”
- Flowchart and PAD representation

## ■ Selection and iteration processes

- `for` statement