0. Introducing C

Hengfeng Wei (魏恒峰)
hfwei@nju.edu.cn

Sep. 15, 2023

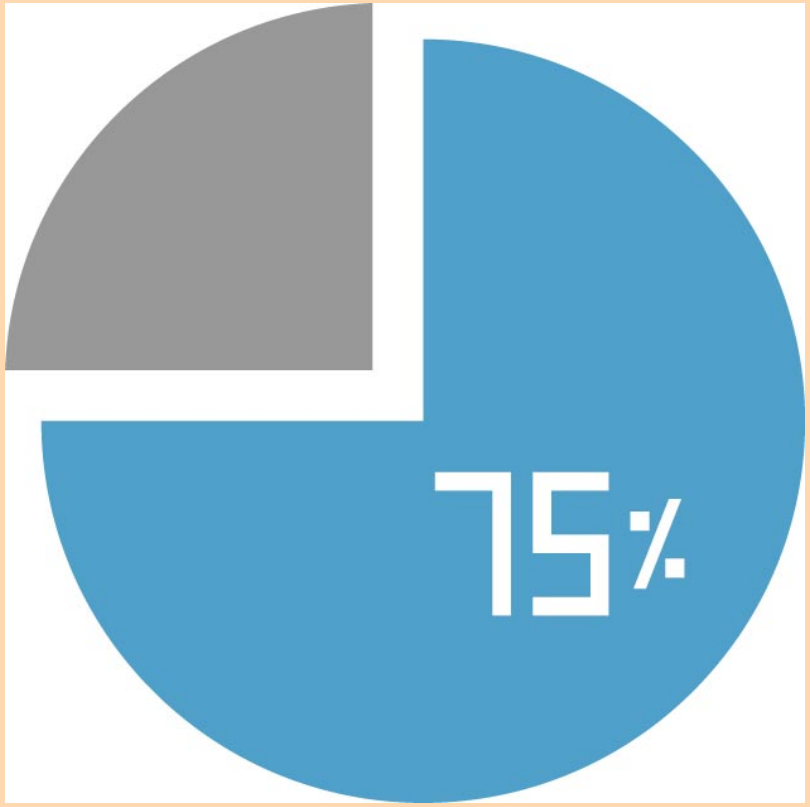
2023CPL

群号: 903318959

2023-CPL-通知群

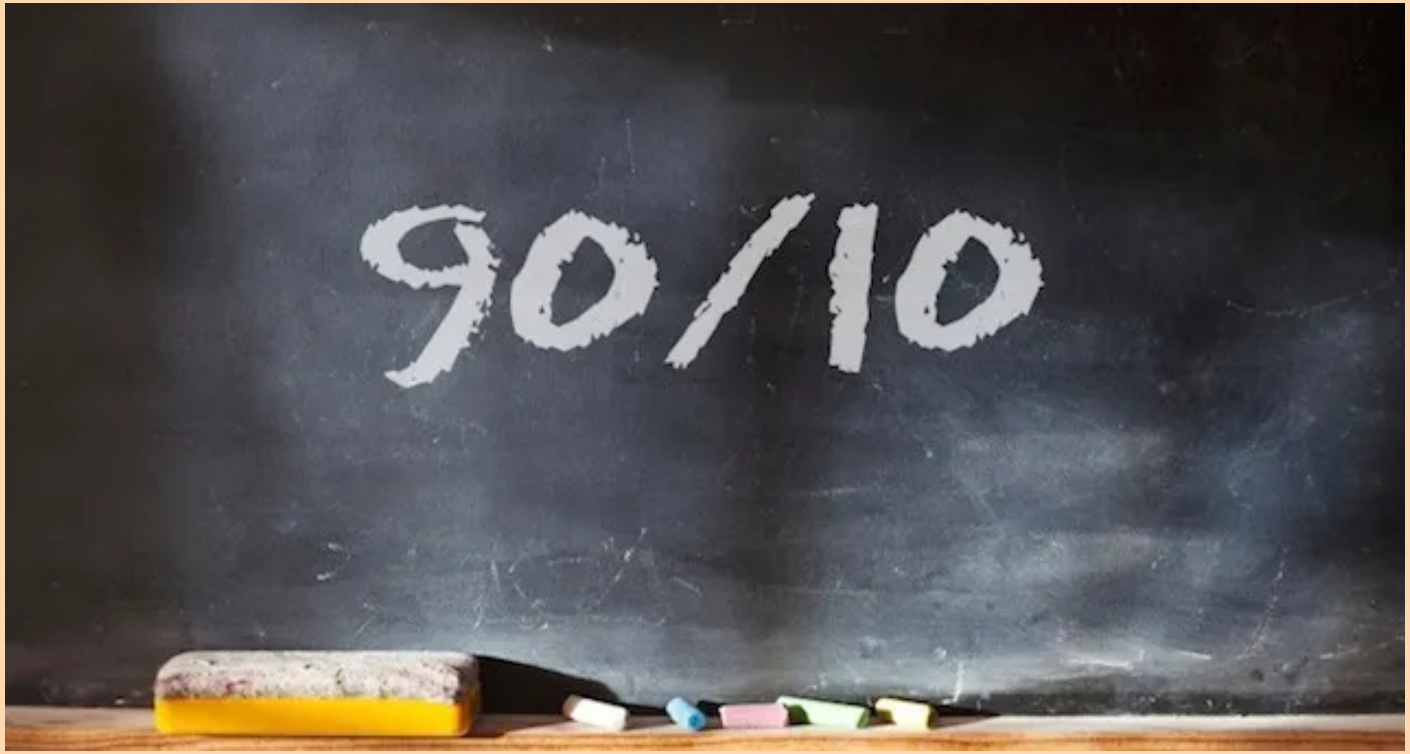
群号: 893689398

Questionnaire (1)



75% of students are new to programming.

Questionnaire (2)



10% of students attended in some programming contests.

To C Beginners

From Beginners to Masters

Programming

De-Programming

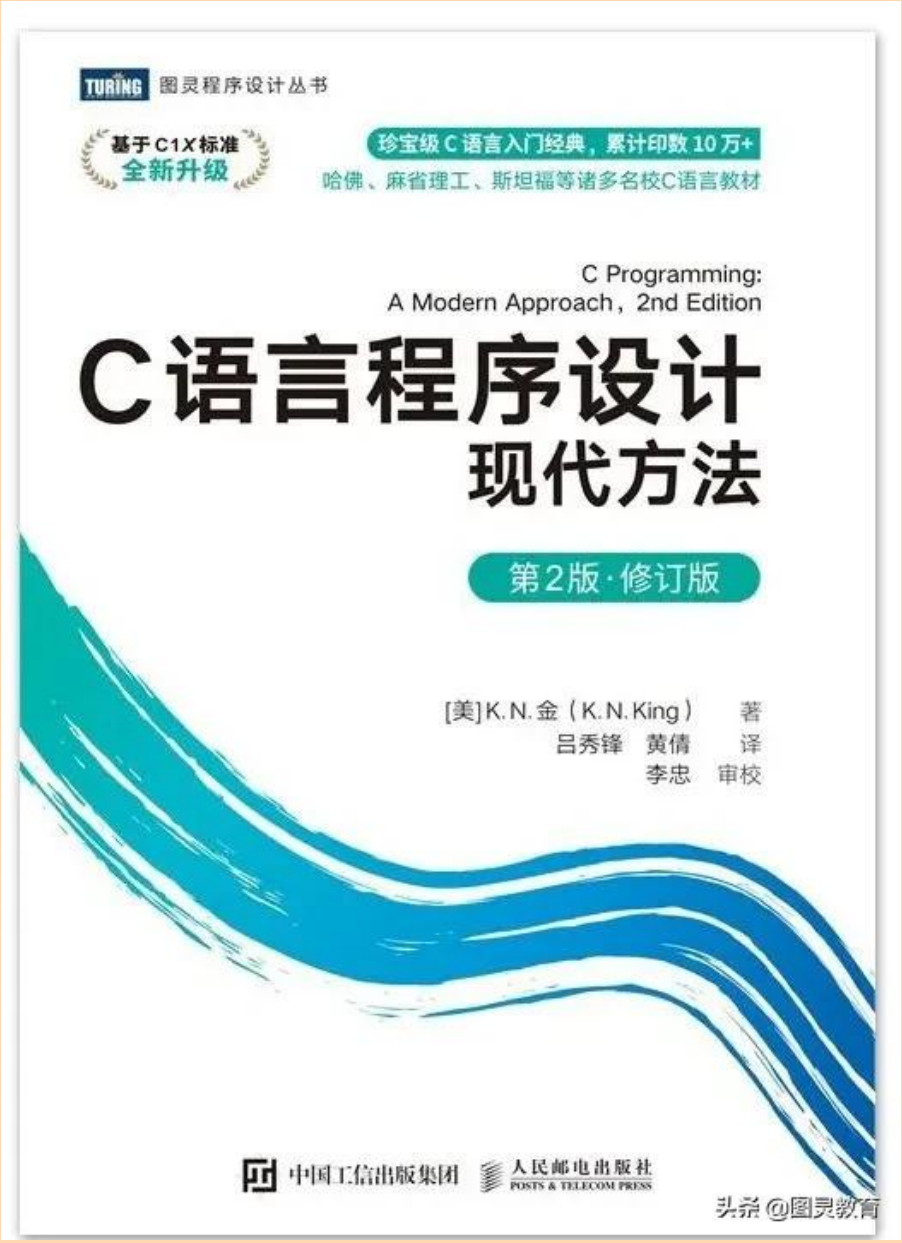
cpl-docs: docs.cpl.icu

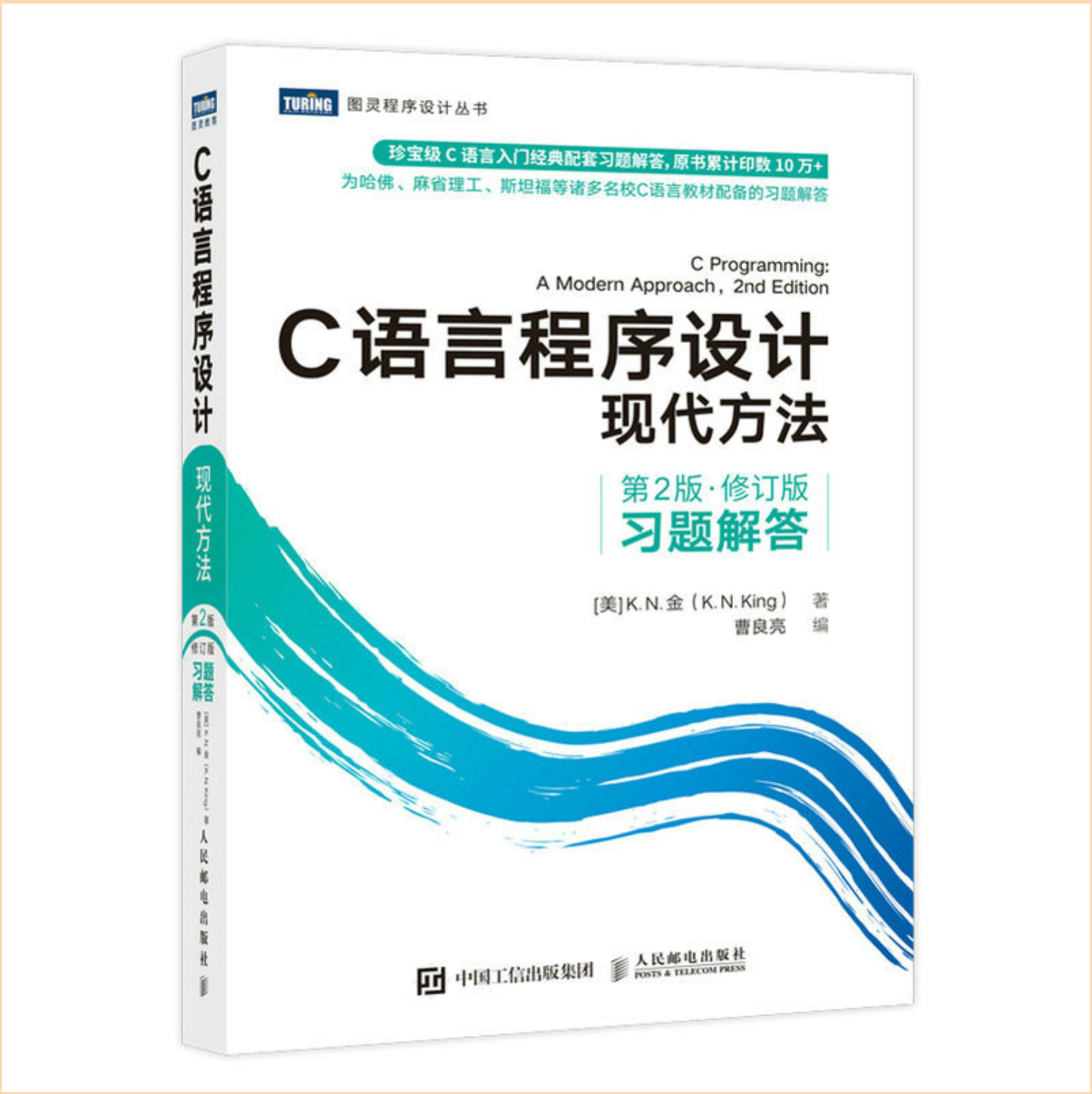
Scores

- ~~考勤 (非必要不点名)~~
- 平时编程练习 (10 分)
- 阶段机试 1 (15 分)
- 阶段机试 2 (20 分)
- 期末机试 (30 分)
- 期末项目 (25 分)

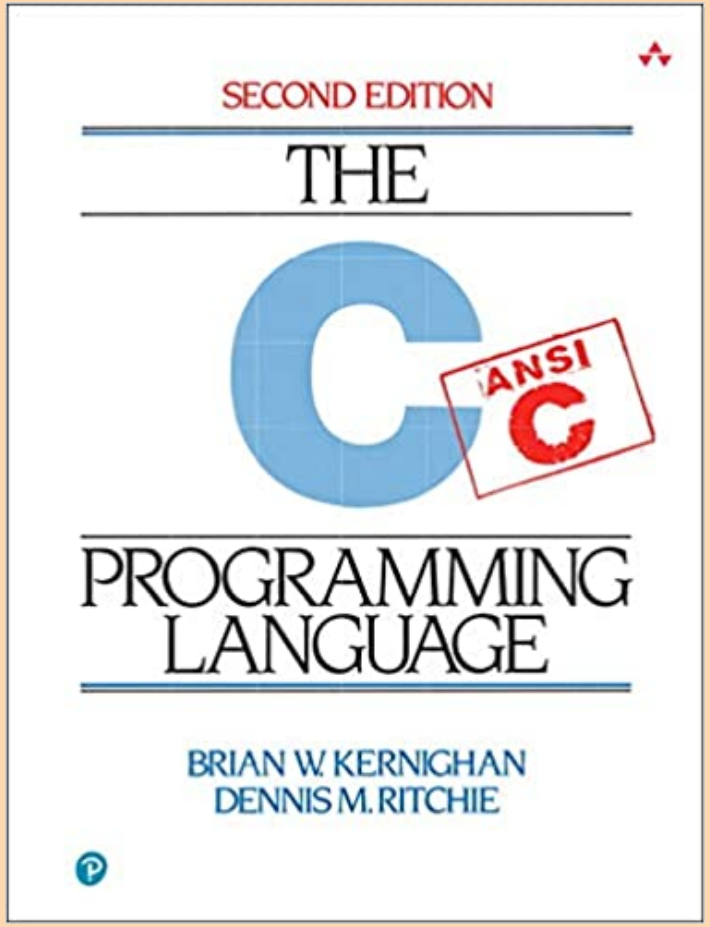
No Plagiarism!!!

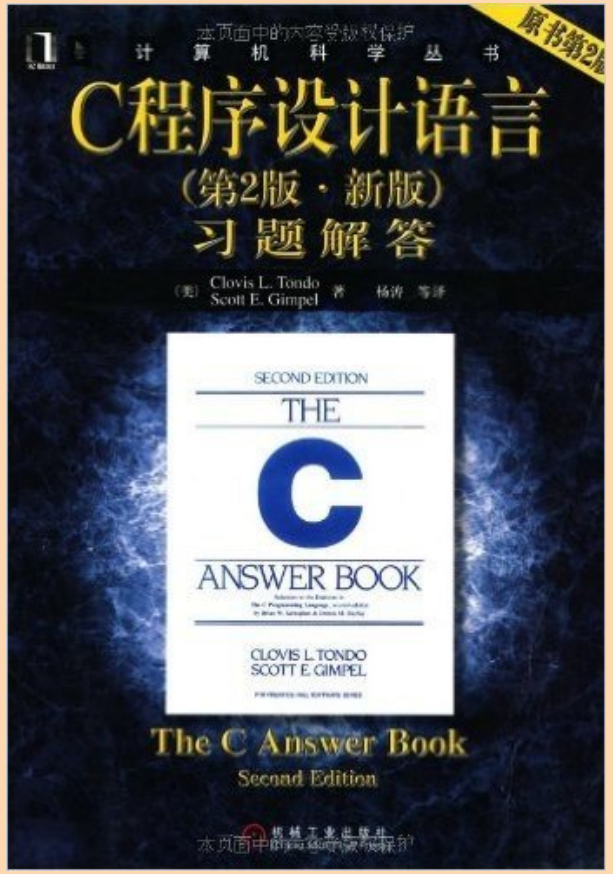
编程练习: 每次扣 5 分, 10 分扣完为止; **期末项目**: 项目分数清零


TURING 图灵程序设计丛书
基于C1X标准
全新升级
珍宝级C语言入门经典，累计印数10万+
哈佛、麻省理工、斯坦福等诸多名校C语言教材
C Programming:
A Modern Approach，2nd Edition
C语言程序设计
现代方法
第2版·修订版
[美]K.N.金（K.N.King） 著
吕秀锋 黄倩 译
李忠 审校
中国工信出版集团
人民邮电出版社
POSTS & TELECOM PRESS
头条 @图灵教育


TURING 图灵程序设计丛书
珍宝级C语言入门经典配套习题解答，原书累计印数10万+
为哈佛、麻省理工、斯坦福等诸多名校C语言教材配备的习题解答
C Programming:
A Modern Approach，2nd Edition
C语言程序设计
现代方法
第2版·修订版
习题解答
[美]K.N.金（K.N.King） 著
曹良亮 编
中国工信出版集团
人民邮电出版社
POSTS & TELECOM PRESS

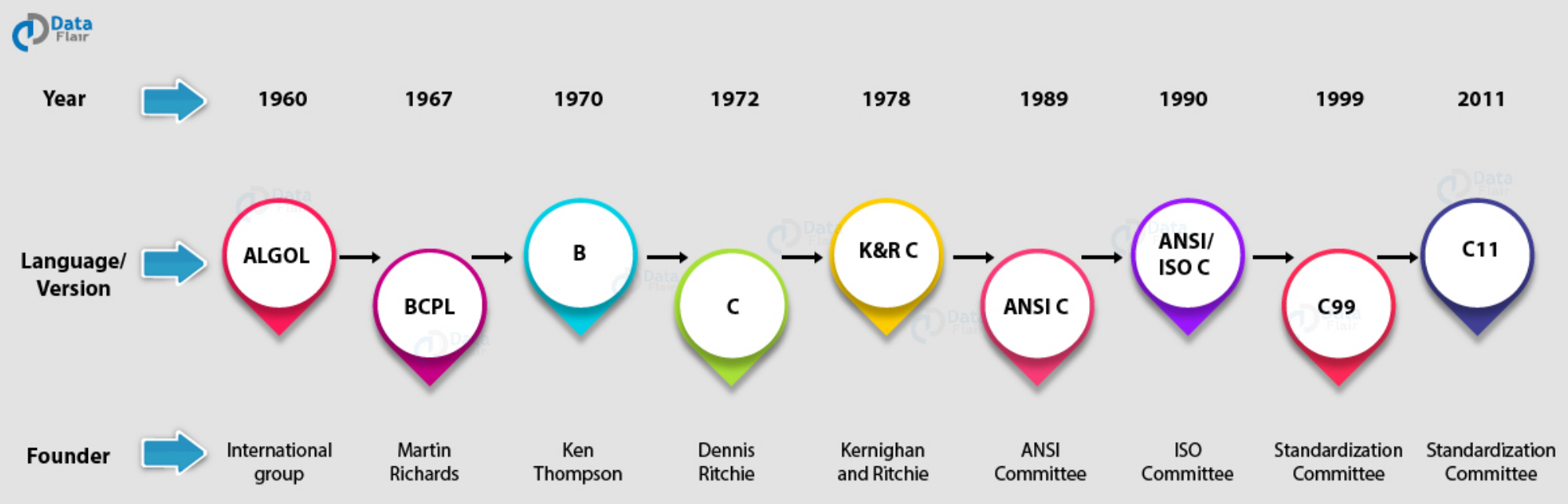
K&R C Bible (1978; 1988)





A Brief History of C

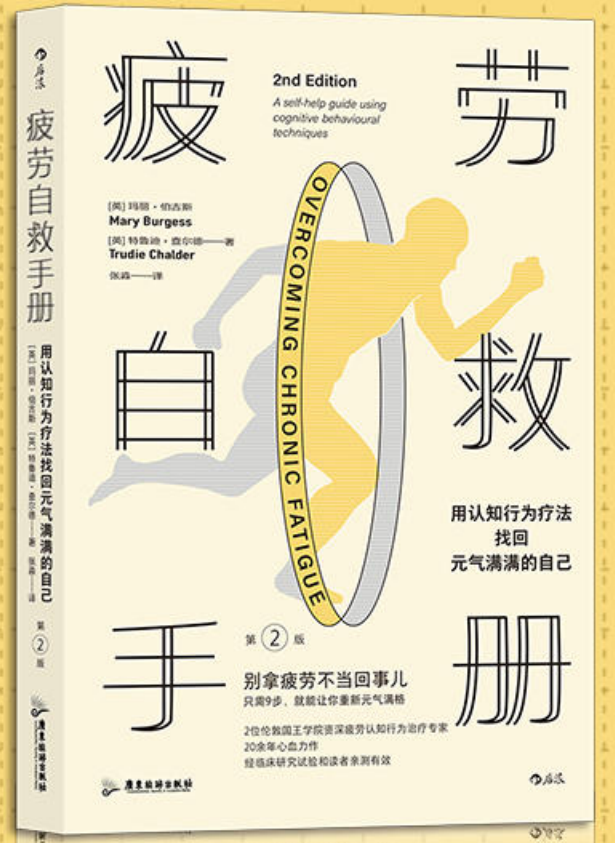
History of C @ cppreference [C17; C23]



Do *NOT* become a **language lawyer**!

More Books in the Class . . .

别拿疲劳不当回事儿

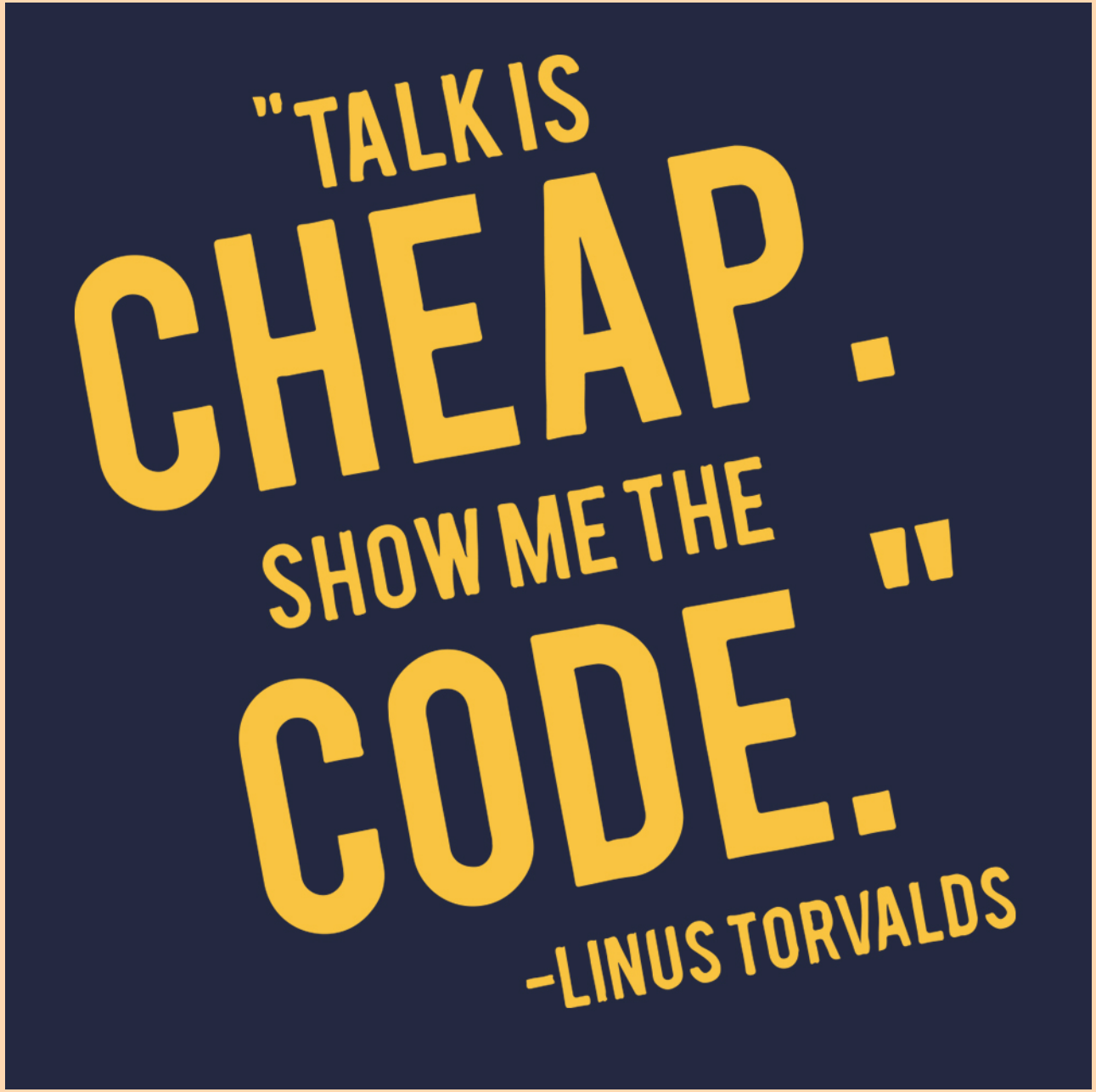


9步让你重新元气满格

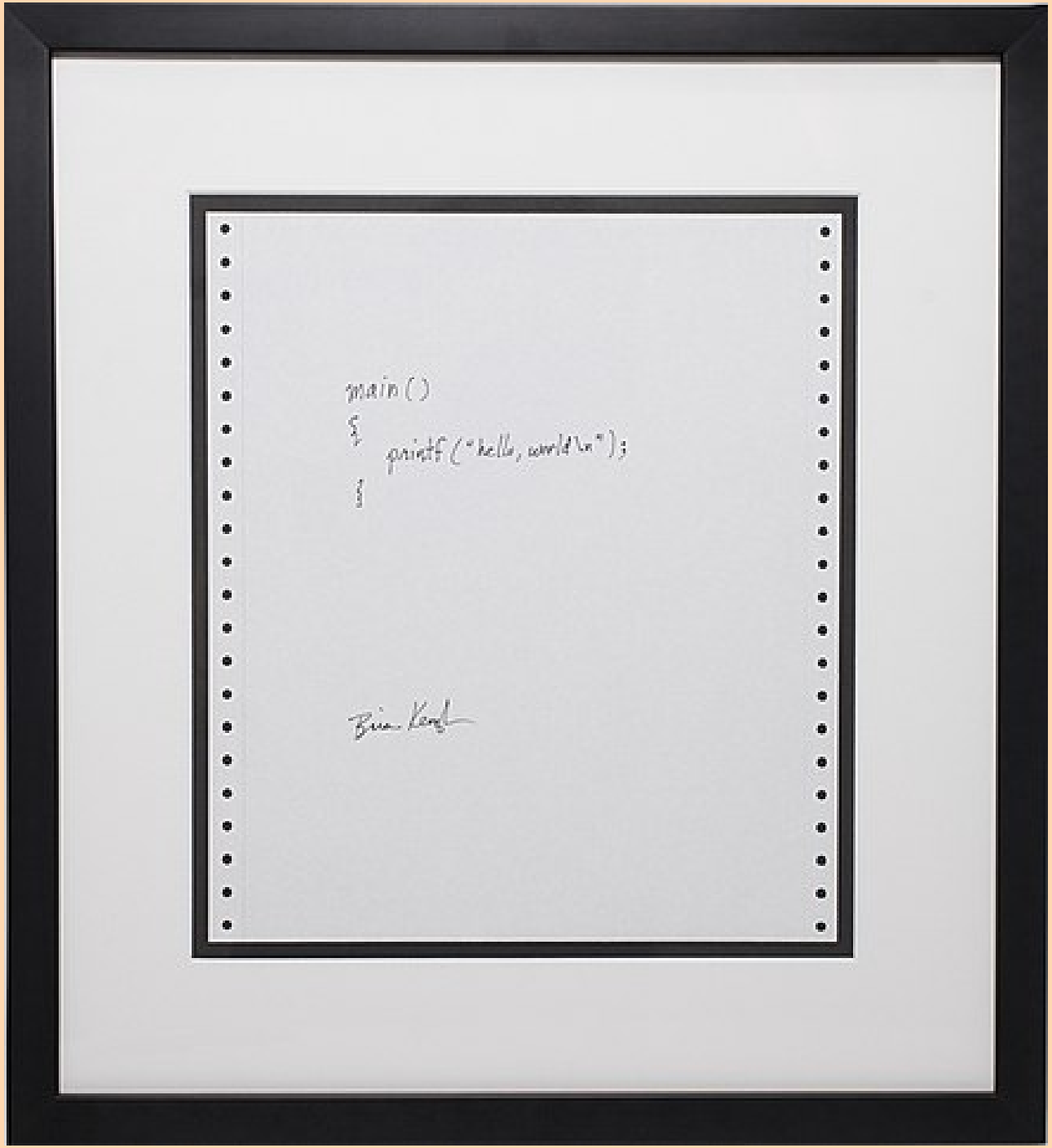
1. 观察你的活动与睡眠模式，了解疲劳是如何对你产生影响的
2. 设定让自己生活更愉快、更平衡的目标
3. 改善睡眠质量，稳定活动和休息模式

……

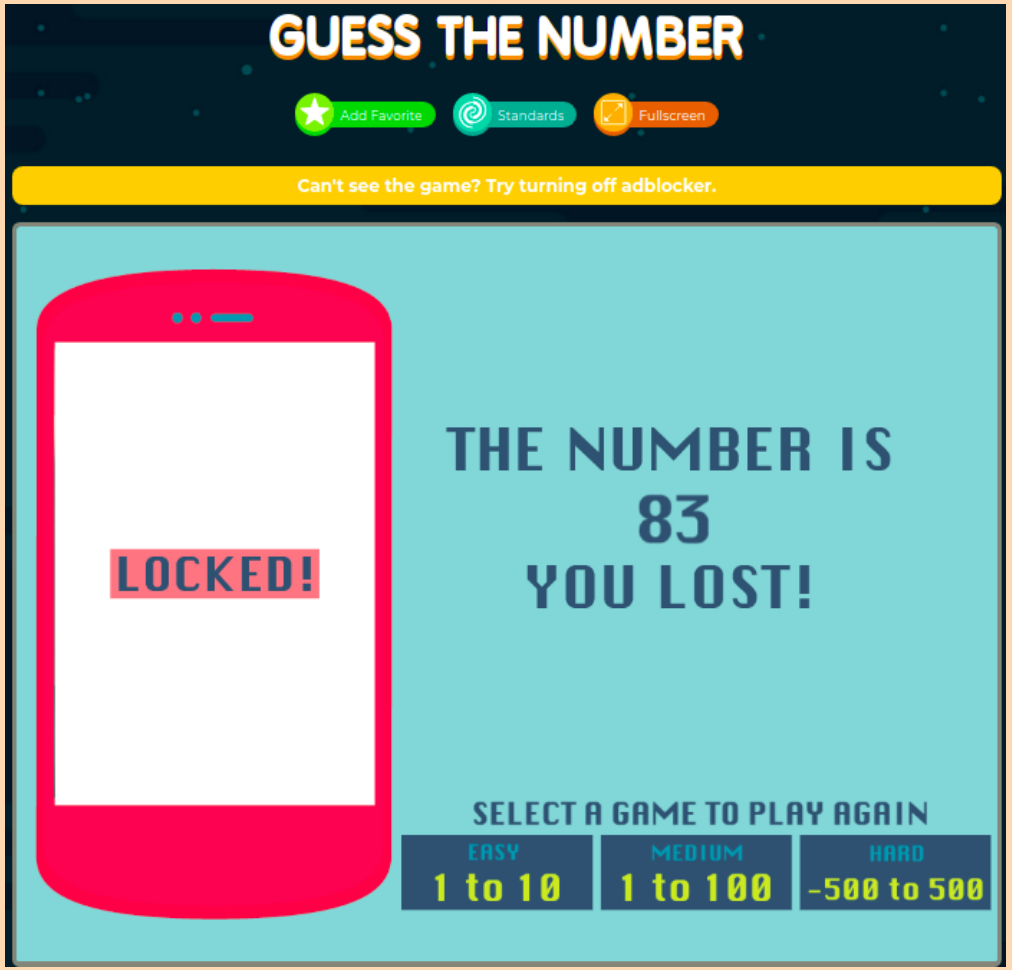
ASK ME
ANYTHING
GREAT MINDS
DISCUSS IDEAS


"TALK IS
CHEAP.
SHOW ME THE
CODE."
-LINUS TORVALDS

```
<Hello World/>
```


main()
{
printf("hello, world\n");
}
Brian Kernighan

Game: Guess the Number



Game: Guess the Number

Programming is *NOT* (only) about languages.

You learn C to express **YOUR IDEAS** with **COMPUTERS**.

c reference

C reference

C89, C95, C99, C11, C17, C23

Language
- Basic concepts
- Keywords
- Preprocessor
- Expressions
- Declaration
- Initialization
- Functions
- Statements

Headers

Type support
Program utilities
Variadic functions
Error handling
Dynamic memory management
Date and time utilities
Strings library
- Null-terminated strings:
  - byte – multibyte – wide

Algorithms

Numerics
- Common mathematical functions
- Floating-point environment (C99)
- Pseudo-random number generation
- Complex number arithmetic (C99)
- Type-generic math (C99)

Input/output support
Localization support
Atomic operations library (C11)
Thread support library (C11)

Technical specifications
- **Dynamic memory extensions** (dynamic memory TR)
- **Floating-point extensions, Part 1** (FP Ext 1 TS)
- **Floating-point extensions, Part 4** (FP Ext 4 TS)

External Links – Non-ANSI/ISO Libraries – Index – Symbol Index

Game: Guess the Number

Program = Input + Data + Operations + Output

ASK ME
ANYTHING
GREAT MINDS
DISCUSS IDEAS

Thank
You!