CS 135602計算機程式設計二 (Introduction to Programming (II))

Instructor: Shun-Ren Yang
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Office Hour: Tuesday morning 10:00-12:00

People

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  - Office hours:
    - Tuesday morning 10:00-12:00
    - Appointment via Email
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  - Office: 台達館 632
  - Office hours:
    - Tentative: Thursday night 7:00-9:00 (暫定)
    - Appointment via Email

Course Outline (1/2)

- **Algorithm**
  - Josephus problem
  - Time complexity
  - Linked list for a ring
  - Doubly linked list for a ring
  - Recursion
- **Compiler**
  - A simple calculator
  - Syntax tree

Course Outline (2/2)

- **Computer System**
  - Architecture: machine organization
  - From .c to assembly to machine organization
  - Parsing assembly: input: assembly code, output: values in registers
- **OOP & C++**
- **Artificial Intelligence**
  - Search: DFS, Backtracking, Priority Queue, Hash, using STL
  - Decision Trees, K-Nearest-Neighbor Method

Required Textbook

- C++ How to Program (Early Objects Version) (Deitel, How to Program) by Paul Deitel and Harvey Deitel

Reference Textbook

- TBD.

Grading

The grade is based on the scores of several labs, one written exam, two midterm exams, one final exam, and several projects, with the following percentages:

1. Online judge labs (8%) — every two weeks
2. One written exam (10%)
3. Two midterm online exams (15% + 15%)
4. One final online exam (25%)
5. Projects (27%)
   - Mini project I (Calculator): 9%
   - Mini project II (Allegro game (OOP)): 9%
   - Mini project III (AI game): 9%

   Note: Hackathon (This is beneficial to related Mini projects)

Grading (Chinese version)

- **8%** 每兩周一次上機 **Lab** (本學期共五次) (多種形式, 可能是上機考或是實作), 如果無法出席必須按照學校的正式流程請假
- **10%** 一次筆試
- **30%** 兩次期中上機考 (每次兩小時考三題，各15%)
- **25%** 一次期末上機考 (三個半小時考五題)
- **27%** 專題
  - Mini project I (Calculator): 9%
  - Mini project II (Allegro game (OOP)): 9%
  - Mini project III (AI game): 9%
  - Note: Hackathon (tentative: 約學期結束前五週舉辦 "一日程式設計馬拉松", 協助完成相關Mini projects)