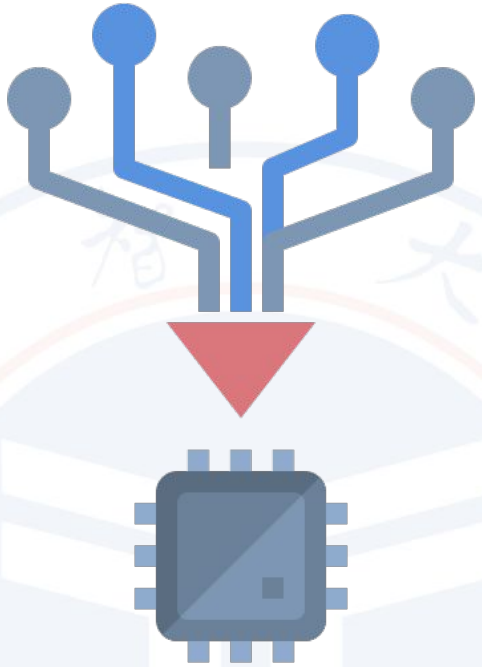


Final Project

Introduction to Compiler

元智大學 資訊工程學系
Department of Computer Science & Engineering

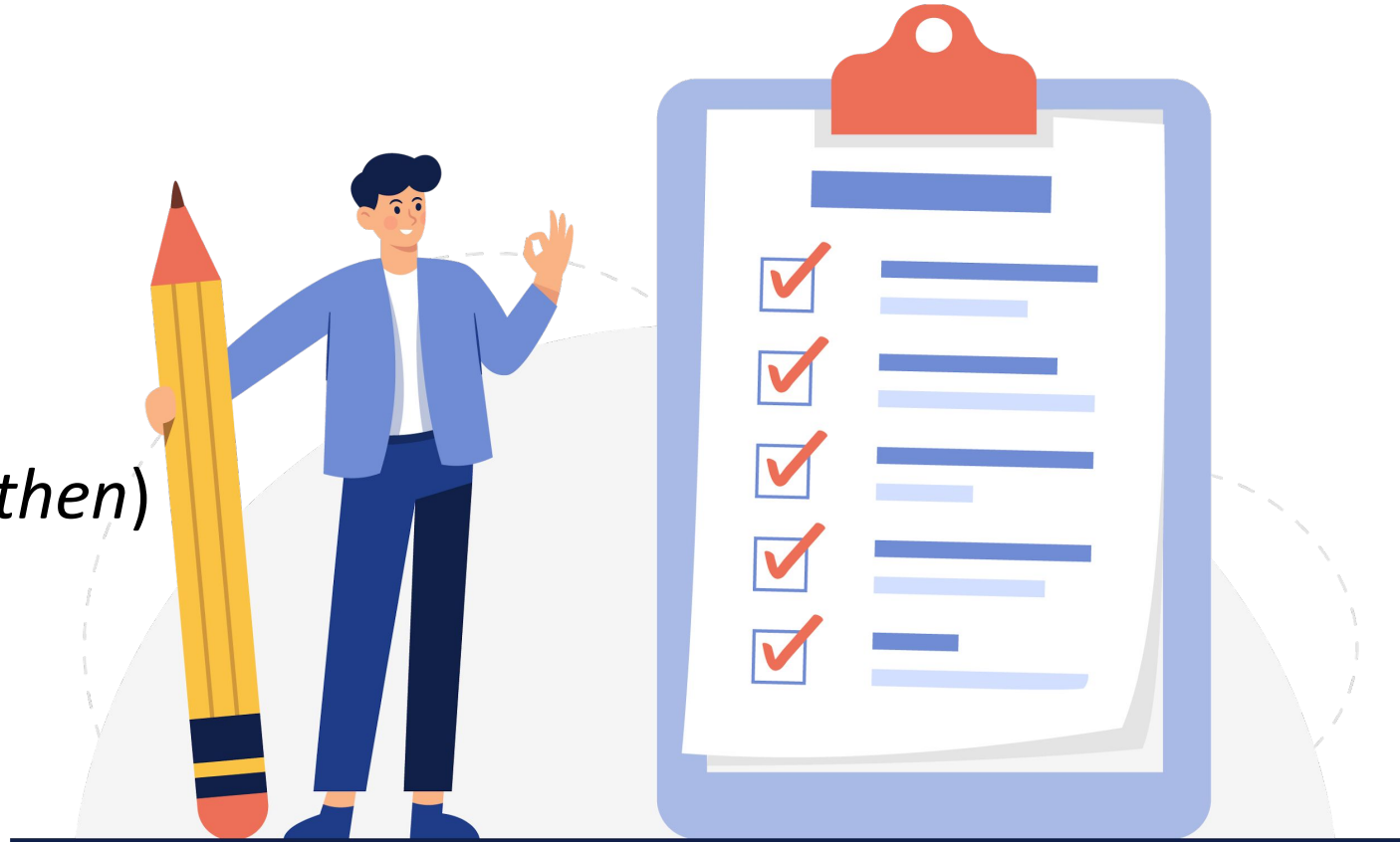
Lecturer: ***Quang-Thai Ho***

Requirements

Build a simple compiler to demonstrate how compilers work

Features:

- Define variables
- Basic arithmetic
- Condition statements (*if/else/then*)
- Loop statements (*for/while)*
- Print content to the screen
- Comments



Requirements

- Team: 1~3 students
- Programming language: any
- Report date: 2022/12/08
- Report duration: 10 minutes
  - PPT: Define your programming language
  - Demonstrate your compiler with some sample input

Evaluation

- Presentation: 30%
- Demonstration: 70%
- Creativity: 20%
  - New syntax
  - New feature

Reference #1

- Programing language: Python
  - https://www.dabeaz.com/ply/ply.html
- Source code:
  - https://github.com/hoquangthaiholy/ply.git (forked from dabeaz/ply)
- Example:
  - https://github.com/hoquangthaiholy/ply/blob/master/Demonstration.ipynb

Reference #2

- Programing language: Python, C
  - http://web.eecs.utk.edu/~azh/blog/teenytinycompiler1.html
- Source code: https://github.com/AZHenley/teenytinycompiler.git
- Generate C source code from input, then compile C code.

```
PRINT "How many fibonacci numbers do you want?"
INPUT nums
PRINT ""

LET a = 0
LET b = 1
WHILE nums > 0 REPEAT
    PRINT a
    LET c = a + b
    LET a = b
    LET b = c
    LET nums = nums - 1
ENDWHILE
```

Reference #3

- Programming language: Lex, Yacc on Linux
  - https://medium.com/codex/building-a-c-compiler-using-lex-and-yacc-446262056aaa
- Source code:
  - https://github.com/AnjaneyaTripathi/c-compiler

Q&A

Questions and Answer

Thank you for your attention