

Computer Organization

Final Project 評分標準

1. System Specifications:

- (1) 16-bit data, 16-bit instructions
- (2) 16-bit registers for computation
- (3) 12-bit immediate numbers
- (4) Assume the instruction memory and data memory are built separately, each has 16-bit address line
- (5) Instruction set should be able to do the following functions:
 - (I) ALU operation: addition/subtraction (at least one), and/or/not/shift
 - (II) Handle long immediate numbers correctly
 - (III) Load/store a word from/to memory
 - (IV) Conditional/unconditional jump (all PC-relative addressing)
 - (V) nop (no operation)
 - (VI) any other instructions that are convenient to users ...

2. 評分方式

- (1) 若上述specifications完全符合，HDL code也全部完成，則依照下表方式給予基本分

架構	基本分數
Single cycle	45
Pipeline	60

- (2) 功能測試：

若能將給定的小程式轉成你的組合語言程式，並能與HDL code共同模擬，跑出正確的結果，可再得**15**分

- (3) 書面報告：

依內容完整性斟酌給予報告分數，但以**25**分為上限

- (4) 扣分部分：

指令集功能不完整，依完成度斟酌扣分(**1~20**)

HDL code模擬有問題，依完成度斟酌扣分(**1~15**)

- (5) 額外加分部份：

新增功能或測試程式則依難易度斟酌加分，但以**10**分為上限

- (6) 不論完成進度，於期限內繳交**完整報告**分數至少為**30**分

※ 請勿抄襲或請槍手代寫，一經發現一律零分計算 !!