Computer Organization
Final Project (Due: Jan. 11, 2015)

1. Topic: 16-bits MIPS CPU Design
2. Team: 5 students form a team. Each team must have a project leader. We will have 11 teams.
3. Report:
   (1) Midterm report (oral presentation, each team 8 minutes, at least 2 person shall present the results)
      (I) Specifications and Block diagram
      (II) Instruction set definition
      (III) Job partition: Team work
      (IV) Test plan
      (V) Schedule and status
   (2) Final report (mail to TA before due day)
      (I) Specifications and Block diagram
      (II) Instruction set definition
      (III) Job partition (the work done by each student)
      (IV) Achieved items
      (V) HDL Design
      (VI) Test program and performance measurement
      (VII) Conclusions
4. System Specifications:
   (1) 16-bit data, 16-bit instructions
   (2) Registers are also 16-bit long, but you can decide the number of registers
   (3) 12-bit immediate number
   (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:
   (Pseudo instructions are ok. But make sure you have these capability)
      (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 …
5. Time Schedule

Items	Date
Name of team member and project leader	12/1 (Mon)
Midterm report and presentation	12/16 (Tue)
Final report and HDL code	1/11(Sun)

*Please mail the list of your team member to TA 林慶和 before 12/1.

*Please mail the presentation slides to TA 林慶和 before 12/16.

*Please compress all your HDL code and final report into a ZIP file and mail to TA 林慶和.