Homework0 for Computer Organization

Submission Deadline: March 29, 11:59pm

Implement your own assembler and dissembler. Your program will be checked with your single-cycle CPU. For the detailed information about assembler and dissembler, please refer to the file on the course website.

* Base requirement:
  + Supporting the following 18 MIPS instructions: Add, Sub, And, Or, Addi, Ori, Sll， Srl，Lw, Sw, Lui, Slt, Slti, Beq, Bne, J, Jal, Jr.
  + Assembler：
    - Input：a MIPS assembly program,
    - Output：its MIPS machine code in hexadecimal code.
  + Dessembler：
    - Input：a MIPS machine code in hexadecimal code,
    - Output：its MIPS assembly program with PC value.
* Extension 1:
  + Implement a graphical user Interface.
  + Supporting pseudo instructions: Bgt, Bge, Blt, Ble, move,
* Extension 2:
  + Supporting more instructions such as: Xor, Nor, Sra, Xori, Lb, Sb, Lh, SW, Jalr, ……
  + Debug mode:
    - Simulate execution of the MIPS assembly program in a step-by-step way with a window to show register values.
    - Simulate execution of the MIPS assembly program from the current MIPS instruction to the end and with a window to show register values.
    - With reset to initialize the simulation.
* Submission:
  + Code files with clear comments (source code, executable file, .bin file and .coe file)
  + Compress the whole package and name it as name-StID-seembler.rar/zip
  + Make sure to submit just one final version of your compressed package.
  + Subtmit to ftp://10.78.18.201, userid: stul, password: stul123
  + Write a report and submit the report to “学在浙大”.
  + Deadline: March 29, 11:59pm, 2020