

## EEEE-521-621-Lab5

- 1) From mycourses download on your desktop this pdf file.
- 2) The goal of this lab is to continue and complete the development of the assembler for your instruction set.
- 3) In this lab you have to show working **transfer, jump, call, and ret** instructions, with both **forward and backward jump addresses**.
- 4) 521: Modify the code in **dxp.txt** so that you execute at least one jump unconditional, one conditional if a status bit is 1, and one conditional if a status bit is 0.
- 5) 621: Same as in 4) above, but in addition use also CALL and RET.
- 6) If you use the DevC++ development environment, archive your project folder, including any intermediately generated output files.
- 7) If you are using another compiler/IDE, provide information about these in your report. Include your source code files and meaningful screen shots to proof that your assembler is working.
- 8) Ultimately, compile a version for release. This should be a standalone executable file. The TA will use this to verify your assembler.
- 9) If time permits, show your assembler at work to your TA. Note: only the TA will assign a grade.
- 10) Archive your project.
- 11) Write your report and upload it along with your archived project(s) in the dropbox on mycourses, as described in the lab policy.
- 12) In addition, write a concise "User's Guide" for your assembler. Page count is not enforced, but it should contain all necessary and sufficient information for someone to be able to use your assembler – NOT its code!
- 13) This concludes this week's lab.
- 14) **Grading**:
  - a. 521:
    - i. Load and Store =  $2 \times 3 = 6$  points.
    - ii. Jump unconditional with forward and backward jump =  $2 \times 3 = 6$  points.
    - iii. Jump conditional if status bit is 1 with fwd and bwd jump =  $2 \times 3 = 6$  points.
    - iv. Jump conditional if status bit is 0 with fwd and bwd jump =  $2 \times 3 = 6$  points.
    - v. Assembler User's Guide = 6 points.
    - vi. Total = 30 points.
  - b. 621:
    - i. Load and Store =  $2 \times 3 = 6$  points.
    - ii. Jump unconditional with forward and backward jump =  $2 \times 3 = 6$  points.
    - iii. Jump conditional if status bit is 1 with fwd and bwd jump =  $2 \times 3 = 6$  points.
    - iv. Jump conditional if status bit is 0 with fwd and bwd jump =  $2 \times 3 = 6$  points.
    - v. CALL and RET (fwd call is fine) =  $2 \times 2 = 4$  points.
    - vi. Assembler User's Guide = 2 points.
    - vii. Total = 30 points.