

Digital Design and Computer Architecture: Lab Report		
Lab 8: Full System Integration (Session II)		
Date		Grade
Names		
		Lab session / lab room

**You have to submit this report via Moodle.**

**Use a zip file or tarball that contains the report and all other files you used for the report, i.e., the entire Verilog project folder and/or all schematics you drew. If any files are missing, it may negatively impact your grade. No shortcuts/links will be accepted.**

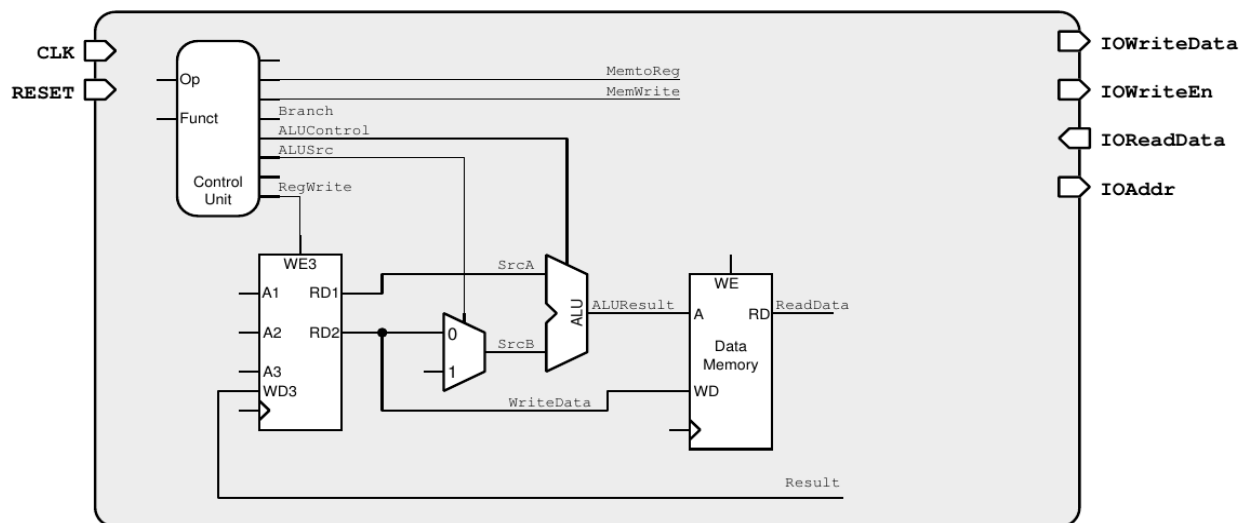
**Only one member from each group should submit the report. All members of the group will get the same grade.**

**The submitted file's name should be *Lab8-2\_LastName1\_LastName2.zip* (or *.tar*), where *LastName1*, *LastName2* are the last names of the members of the group.**

**The deadline for the report is a hard deadline and it will not be extended.**

### Exercise 1 (2 Points)

Below is a part of the MIPS block diagram. Draw the necessary modifications for the memory-mapped I/O on this block diagram. (We are only interested in the SW and LW instructions; the rest of the block diagram has been purposefully left out. *Hint: If your circuit works, you already implemented this in the MIPS.v module.*)



**Exercise 2 (1 Point)**

Using Figure 1 as a reference, what additional hardware/architectural changes are needed in the top module (*top.v* file) to implement Challenge 2 described in the Manual of Lab 8, Session 2? You can either draw the additional circuitry required or write in your own words here.