

# 605.611 - Foundations of Computer Architecture

## Assignment 08 - Pipelining

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1. Identify the size and bits values for each of the pipe line registers IF/ID, ID/EX, EX/MEM, MEM/WB. You should use slides 66 and 75 combined for this. Be sure to include the control bits in the registers. So for the IF/ID register, you would say "size is 64 bits, contains Instruction (32) and PC(32)".

Pipeline Register	Size (bits)	Values
IF/ID	64	Instruction (32) PC (32)
ID/EX	128	rs and rt from IF/ID (64) Sign-extended immediate (32) PC (32)
EX/MEM	97	ALU result (33) ALU zero (1) rt (32) PC (32)
MEM/WB	64	Read data (32) ALU result from EX/MEM (32)