Lecture 13: Control Hazards

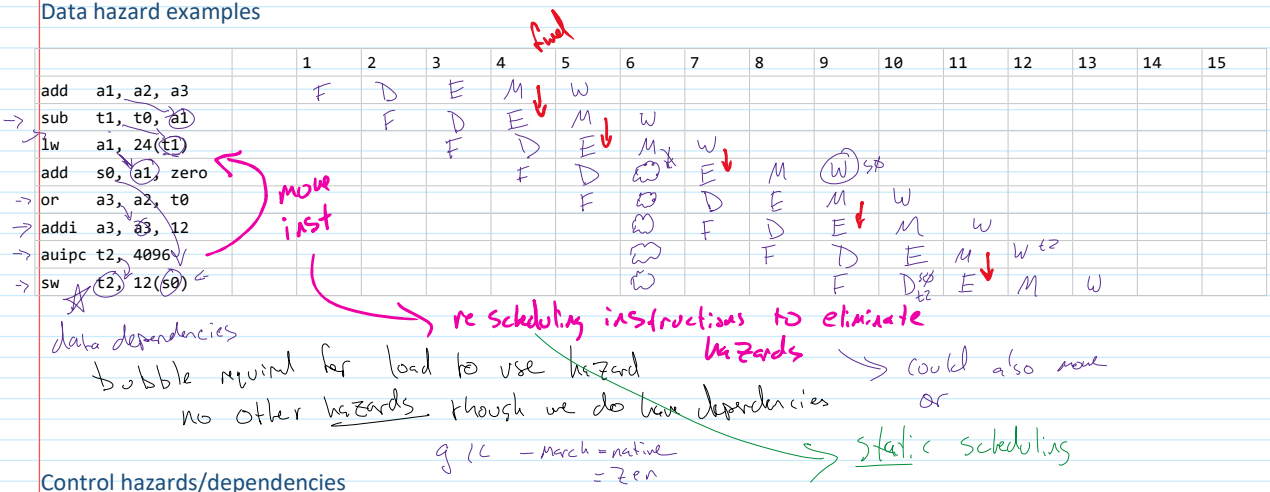
Wednesday, February 6, 2019 9:13 AM

Outline

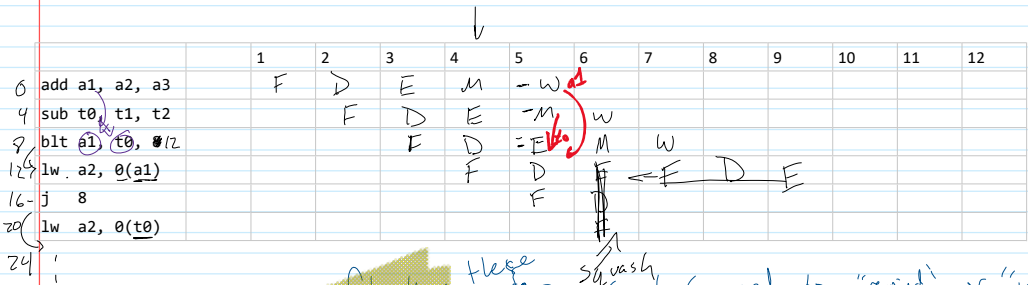
- Finish data hazards and scheduling
- Control hazards
- Other hazards

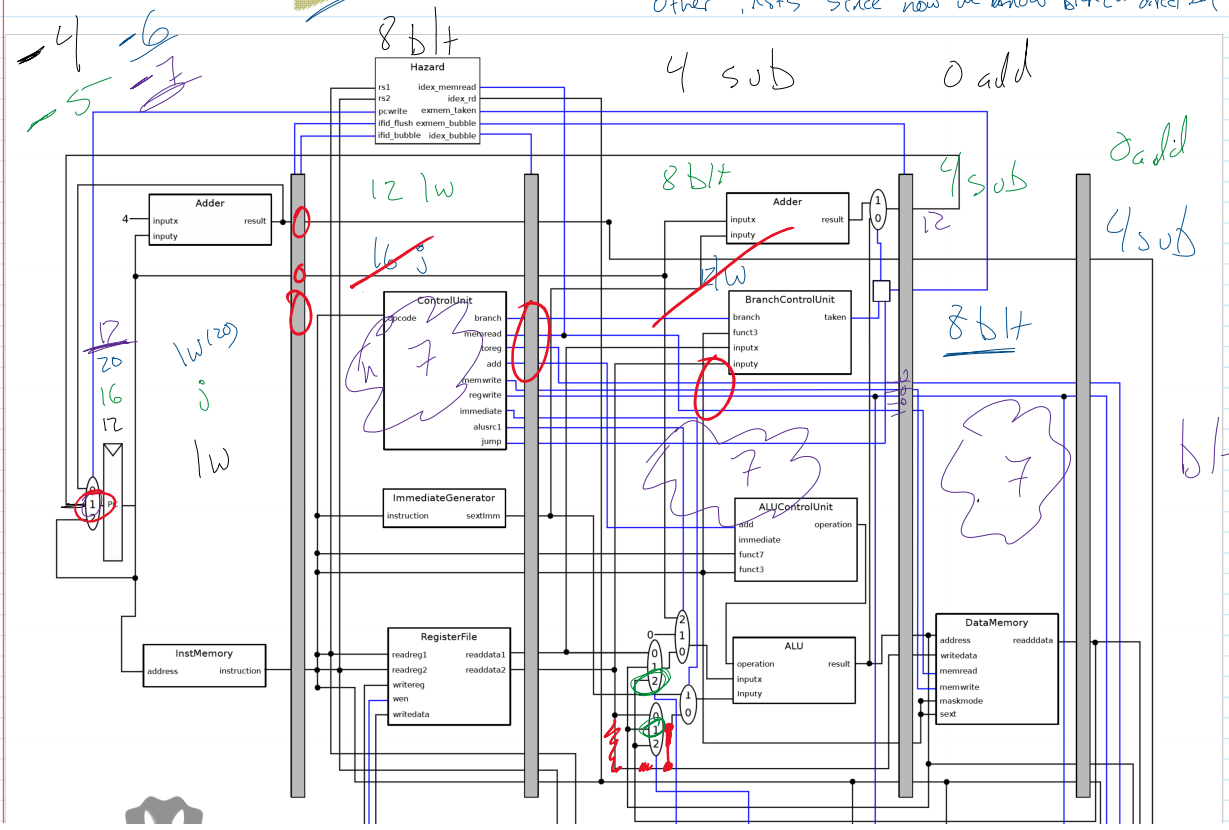
Push back lab 3 due date

Data hazard examples

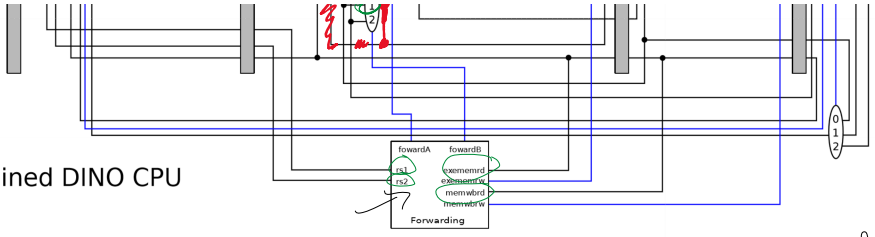


Control hazards/dependencies





Pipelined DINO CPU



Same basic as P types

auipc
R[rd] = PC + I2

how to know to fwd store data?
M[R[rs1]] = R[rs2]

if rs2 in EX == rd in MEM

Improving performance of control hazards

Other hazards

Summary of hazards

Three types of hazards and how to improve performance of each