

**Problem 1:** Solve Spring 2012 Final Exam Problem 3, in which pipeline execution diagrams are requested for some superscalar systems.

**Problem 2:** Solve Spring 2012 Final Exam Problem 6 (d) and (e). (Just those two.) These questions concern the techniques of widening (superscalar designs) and deepening (more pipeline stages) our implementation to exploit more instruction-level parallelism.

**Problem 3:** Solve Spring 2012 Final Exam Problem 4, which asks for performance information about some branch predictors.