Keystone (Group 6)
dlofran2, mwdanie2, gentil2
Kenny Umenthum
ECE 411 – MP3.4
Fall 2017

Progress Report

For this checkpoint, we had to implement a static branch predictor, an eviction write buffer, as well as performance counters. For the branch predictor, since it had to be static, we chose to create a static taken branch predictor to minimize the wrong predictions in the case of a loop. As for the eviction write buffer, we decided that placing it between the L2 cache and main memory would be a better option. Like every checkpoint, the debugging phase was the most time-consuming part of the checkpoint, especially because fast X (the platform we had to use when off-campus during break) was slow, and Quartus and ModelSim were crashing a lot. Besides problems with the tools used, some unexpected errors came up while debugging. For example, during NOPs it would go to eviction state and evict cache lines that were not dirty. Other errors like that, that did not make much sense to us at first happened making the debugging stage more difficult than expected.

We set up this checkpoint organization mostly like the previous ones.