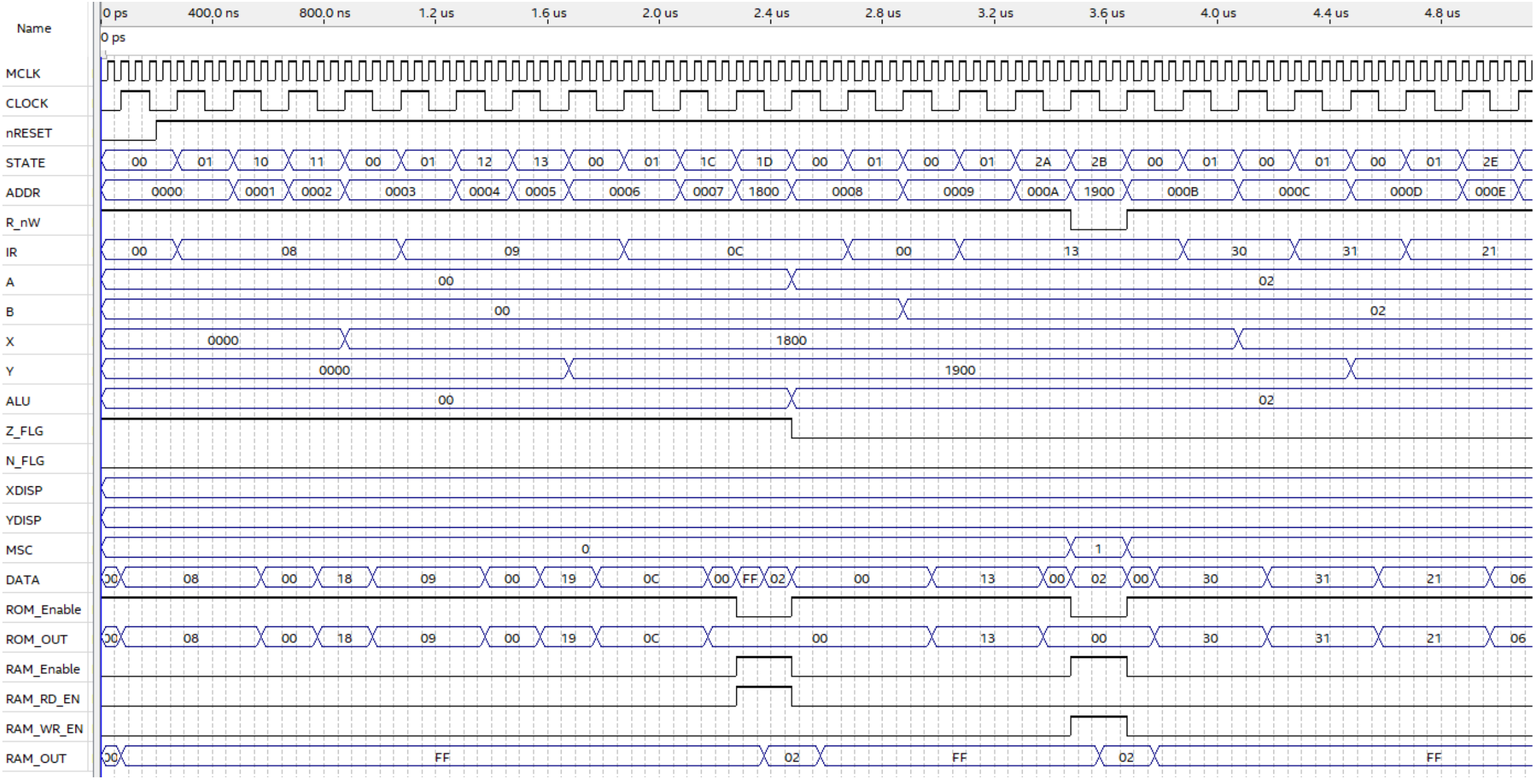GCPU Simulation