

Daniel Mendelsohn
October 31, 2013
Final Project Abstract

An interactive video game on the piano

For my final project, I will build a piano-based video game along the lines of Guitar Hero. The user will play on a normal electrical keyboard that will be plugged into the FPGA via its MIDI output. For my display, I will use a normal video monitor with VGA input. The monitor will display musical notes on a staff. The notes will flow from the right edge of the screen to the left edge. When the notes reach the left edge of the screen, the user is supposed to press the corresponding key on the keyboard. If the system detects a correct press at the correct time, the player's score increases. An incorrect press, or missing a note, causes the player's score to decrease. The underlying data, representing the timing of the notes in a song, will be stored in memory and read when needed.