

Bass Hero

6.111 Project Abstract

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Our 6.111 project will implement a game on the FPGA similar to Guitar Hero, a game developed by Harmonix. We will interface a real bass guitar with the FPGA and the user will play by hitting the notes and chords displayed on the screen. The user will gain points by hitting the proper notes, and lose points if he fails to play the correct note. It will essentially be DDR with a guitar instead of your feet. Humberto will work on interfacing the guitar with the FPGA and the modules that tell the game logic which notes the user is currently playing. Alex will work on transposing a song that the user can play and the graphics for displaying to the user which note he has to play. Humberto will also work on a scoring module that can keep track of the score or accuracy of the player and report back to the game logic. A song, or more than one song will be stored in memory and the user will be able to choose a difficulty level, and which song he wishes to play (hopefully). Changing the difficulty level will alter the amount of notes the user is asked to play, and the amount of correct notes the user will have to play to not get booted off the stage.