

David Levenson  
Danny Malconian  
Checkoff Sheet

### **Design**

Block Diagrams, FSM, code for DAC's, Hit Recognition Module, Audio ROMs and Waveform Display (Danny)

Block Diagrams, FSM, code for Playback Module, Main Controller Module, Game Logic and Video, Video ROMs (David)

Block Diagrams, FSM, code for Drum visualization (both)

System integration (David and Danny)

### **Functionality**

Demonstrate assigned intensity and hit recognition from drumpad input by showing that the volume of the sound coming from the kit depends on how hard the drum pad is hit. The 4 bit value of the intensity will also be displayed either with LEDs or on the alphanumeric display.(Danny)

Demonstrate that the playback module functions properly by hitting each pad and showing that the correct drum sound is outputted based on which pad was hit. (David)

Demonstrate plot of waveform of Drum input verifying that basic visualization techniques work and that the system is receiving the correct data from the drum pad(Danny)

Demonstrate "Dancing Man" visualization from drum input beats. The "Dancing Man" will move as the drums are hit. (Danny and David if time permits)

Demonstrate that characters can be displayed on screen from memory (David)

Demonstrate that characters can move across screen based on input from a drum pad (David)

Demonstrate working game complete with multiple characters racing across the screen (David)

Demonstrate the ability to switch between functions of the system (ie playback mode and video game mode) and that all modules interface properly by switching back and forth and playing the game using the drum pads (David and Danny)

### **Discussion**

How did you recognize a hit and assign an intensity to it?

How did you store the values and display them appropriately through waveforms and visualization techniques?

How did you move characters based on drum input?