

Checklist

Sarah-Jean CUNNINGHAM

- ✓ *Create a decoder module:*
 - Converts the received ascii codes from the keyboard into required signals and corresponding notes
 - Creates a ready signal, used by the storage module to store the notes once they've been played
 - Counts the length of time a note is played for

- ✓ *Create a game module*
 - Generates a random note which is then sent to the synthesizer module to be synthesized
 - Compares the user inputted note to the random generated note

- ✓ *Create a divider module*
 - Divides the 64 Mhz clock to produce a 10 Hz clock
 - Makes the 10 Hz clock edge synchronous with the playback request and the fifo_empty signal

- ✓ *Create an image directory*
 - All the different images will be put into a ROM
 - This will include the welcome and instruction screens

- ✓ *Create a Video FSM*
 - This is the user interface with the system
 - It will call different images to be displayed depending on what state the tutorial is in. For example; on a reset, the welcome screen will be displayed; when a note is played, the corresponding images will be displayed

Anne ROMEO:

- ✓ *Keyboard module:*
 - Using the codes available on the website, this is the interface between the PS2 keyboard and the labkit.

- ✓ *Storage module:*
 - During Record mode, stores the notes played (as given by the Decoder) as well as the amount of time they have been played for in a 32kx16 RAM.
 - During Playback mode, outputs the stored notes to the Synthesizer, taking into account the length it should be played for.
 - When Reset is pressed, the memory is wiped clean.

- ✓ *Synthesizer:*
 - Synthesizes the notes to be played using DDS and outputs them to the ac97.
 - As time permits, harmonics will be added to make the sound closer to one of a piano.
 - Takes into account the length of the note during live playback.

- ✓ *Time Permitting:*
 - Higher quality images will be used
 - Mouse interface as well as keyboard
 - Higher quality sounds
 - Variety of instruments

Schedule

Module	Week 1	Week 2	Week 3
Keyboard	✓		
Decoder	✓		
Divider	✓		
Video		✓	
Synthesizer		✓	
Storage	✓		
Playback	✓		
Game	✓		
			Consolidation and Implementation