Checklist

Sarah-Jean CUNNINGHAM

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

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

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

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

✓ Create a Video FSM
  o This is the user interface with the system
  o 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:
  o Using the codes available on the website, this is the interface between the PS2 keyboard and the labkit.

✓ Storage module:
  o 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.
  o During Playback mode, outputs the stored notes to the Synthesizer, taking into account the length it should be played for.
  o When Reset is pressed, the memory is wiped clean.
✓ Synthesizer:
  o Synthesizes the notes to be played using DDS and outputs them to the ac97.
  o As time permits, harmonics will be added to make the sound closer to one of a piano.
  o Takes into account the length of the note during live playback.

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

Schedule

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