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6.111 Final Project - Virtual Pet Checklist:

Beat Detector:

The beat detector receives audio signal from AC97 and outputs high if the increase of the signal strength is above the threshold value. To demonstrate the functionality of this module, I will use the LCD display to show if a beat is detected when I feed in some music with strong beats.

Video Module:

There are several video modules, each of which can be demonstrated individually. I will use switches to turn on the video modules.

- a. Idle dog: a video module that displays the dog when there is no beat.
- b. Dancing dog: a video module that displays the dog dancing when there is a beat.
- c. Health Meter: a video that displays the health level of the dog.
- d. Lights: a video module that indicates the emotion of the dog when it is idle, and that indicates the beat when it is dancing. I will use switches to simulate the emotion states and beat detection.
- e. Main Controller: FSM with 2 states, idle or dancing. It changes its state corresponding to the beats. I will use switches to simulate beats.

If time permits,

I will implement a video module that indicates the strength of the audio signal at different frequencies.