6.101 Final Project Checkoff List

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I. Commitment

- A harp frame with 6 functioning LED strings, consisting of 3 laser beams, which correctly responds to the beams being broken
- A control voltage corresponding to the frequency of each string
- An envelope generator circuit with attack and decay
- The appropriate conversion from linear to exponential input control voltages
- A square and triangle wave VCO
- A working class AB amplifier

II. Goal

- An envelope generator circuit with attack, decay, sustain, and release
- Volume control that depends on how many beams of the string were struck
- Tuning the filter of the VCO to pass only the fundamental frequency and the first two to three harmonics
- A working class D amplifier

III. Stretch

- LED indicators that flash whenever a string is struck on the harp frame to see fun visual confirmation
- An octave switch for the control voltages with the capability of setting them higher and lower voltages corresponding to higher and lower octaves
- VCO generating 3 octaves of fairly well tuned C major pentatonic scale
- A pedal switch that affects the envelope generation circuit's release
- Low frequency oscillator switch that adds tremolo to the control voltage input
- Equalizer effects on the passed harmonics