6.111 Project Checklist
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- Output Module (Venkat)
  - Properly display video on a TV sourced from the video input module (done: 11/29)
- Control Module (Ben)
  - GUI Functions
    - Buttons respond to mouse input (Done: 11/21)
    - All buttons rendered on screen (Done: 11/21)
    - Font rom used to render text on screen (Target: 11/29)
    - Keyboard input accepted and displayed on screen (Target: 11/30)
  - Logic Functions
    - Simple control outputs work – framegrab trigger, all enable lines, bluescreen calibrate, zoom position and magnitude, trace clear (Target: 11/30)
    - Overlay memory programming work – select, data, we. This will need to be tested along side the appropriate portion of the overlay module to verify correct behavior. This step will include placement of overlay objects and trace. (Target: 12/2)
    - Font rendering and loading into overlay memory (Target: 12/4)
- Overlay Module (Venkat)
  - Overlay Functions
    - Demonstrate overlay functionality with a color square (Done: 11/29)
    - Setup BRAMs for text and trace objects (Target: 11/30)
    - Overlay hardcoded trace data (Target: 11/30)
    - Setup position and length registers for text and test with hardcoded data (Target: 11/30)
    - Test overlay with hardcoded framegrab data (Target: 11/30)
  - Control Module Memory Interface
    - Implement select logic to decode signal sent from control module (Target: 12/1)
    - Test write capability with hardcoded signals (Target: 12/1)
- Zoom Module (Venkat)
  - Setup one ZBT RAM with a faster clock and double buffering (Target: 12/3)
  - Zoom using sample/hold around top left corner of frame and a zoom factor of 2 (Target: 12/3)
  - Zoom using linear interpolation around top left corner and a zoom factor of 2 (Target: 12/4)
  - Zoom around an arbitrary point (Target: 12/4)
  - Zoom with variable scale factor of at least 2 (Target: 12/4)
- Framegrab Module (Ben)
  - Setup one ZBT ram to capture one complete frame of video (both fields) (Target: 12/5)

    - Test reading out value using working overlay module (Target 12/5)
    - Use DCM to generate faster clock, and configure framegrab module to be dual port so it can be accessed by both the overlay and bluescreen modules simultaneously (Target 12/6)
- Blue Screen Module (time permitting)
    - Implement background filter with hardcoded threshold values (Target: 12/5)
    - Implement calibrate logic to find thresholds for background pixel value (Target: 12/5)