Project Check-off Checklist

Overall

☐ We will load a scanned and correctly rotated image of a piece of sheet of music into the labkit ZBT-RAM. We will then press a button to start the process, wait for a done light, press the play button, and then listen to the music.

☐ (if time permits) The camera will capture and image of the sheet music and send it to the rotation checker to be oriented and scaled correctly. The image will then be processed and we will wait for an LED indicator that the music is ready. We will then press a button to play the recognized music.

Individual Module Checklist

Note Decoder

☐ We will use the logic analyzer to show the frequency and duration outputs for each note.

☐ (if time permits) The VGA output will be used to indicate the current note.

Staff Finder

☐ The VGA output will show an image of the edge-detected sheet music with highlighted staff lines.

Pattern Matcher

☐ We will use the logic analyzer to show the position relative to the staff of each note and its duration.

Frequency Finder

☐ The logic analyzer will again be used to show the frequency of the note from its position on the staff

Edge Detector

☐ We will be able to show the edge-detected image on the VGA output. The image should clearly show the top and bottom staff lines and notes.

Audio Processor

☐ The audio processor will be able to play a predetermined sequence of notes over the headphones. We will be able to show the progression of notes on the logic analyzer.

☐ We also will be able to change tempo during the demonstration.

Camera interface (if time permits)

☐ The camera will capture images and display them via the VGA interface. We will also be able to capture a static image.

Rotation Checker (if time permits)

☐ We will be able to show a captured image on the VGA output and then an image rotated to have the staff lines parallel to the top and bottom of the image.