

EE2905 Lab Project – Individual Project – No Collaboration

Objectives

- Culmination of programming learning for the quarter

Prelab

- None

student
check off

Assignment

Part 1: Create a program that asks the user for a series of notes and note lengths 70%

Notes: C – B + R(rest) length: eighth, quarter, half, whole (e,q,h,w)(8,4,2,1)

Use C4 – B4

Length of the song can be up to 50 notes (ask the user how many notes to collect)

Once the notes have been entered, wait for the user to push a button

When the button is pushed play the notes on the speaker

When the song is complete, allow the user to replay the song (when button pushed) or enter a new song

Part 2: Add a potentiometer and use it to vary the speed of playback 20%

Use a range of 60bpm to 120bpm

Part 3: Add a 10 segment LED and display the 7 notes on it – 1 LED / note 10%

Check Off

- Demo and document your project

Checkoff due by 3:00 pm Friday week 10 (in-person)

Informal Lab Report: flow diagrams, schematics, code - due 4:00 pm, Friday of week 10.