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Report for Lab #6:
Final Project

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In this final project, we synthesized a song from reading notes in an excel worksheet. The first row of the note matrix in excel represents length of each note. L1 represents a duration of 0.125s and Ln = n * L1. All other rows of one column are used to represent chords. For each cell, a frequency specifier tells which octave the note should be: A '-' sign represents the octave based on 220Hz and '+' sign for 440Hz and '*' sign for 880 Hz. We also expanded the octave to 12 notes by adding black keys represented by lower case characters. For each note synthesized, we multiplied it with a factor of two. We also applied an exponential windowing function to the notes to get better sound effect. After a prototype is synthesized by adding notes to an array while traversing a note matrix read from excel, we applied equalizer function used in lab 5 with Gi coefficients being 10, 5, 1, 1. This would make the low-frequency content sounds higher in magnitude.