

Lab 9 – Lists and Dictionaries

March 27, 2019

Lists and Dictionaries

Problem 1:

Create a program which asks the user for a list of notes in the form of: B0 G2 D5

Take the string input from the user and split it into a list of frequencies to play on the Arduino.

Play the song the user input, allowing for $\frac{1}{4}$ second per note

See: <https://www.arduino.cc/en/Tutorial/ToneMelody?from=Tutorial.Tone> for which frequencies connect to which notes.

See: `str.split(sep)`: <https://docs.python.org/3/library/stdtypes.html>

Problem 2:

Create a more interactive system.

Ask for a command. Implement play, store, and exit.

If the user chooses play, ask for the name of a song and then ask for the string of notes as in problem 1. Store the list of frequencies as a value in a dictionary with the song name as the key. Then ask for another command.

If the user chooses play, display all the known songs and then ask the user to enter the name of the song to play. Play the song, the user entered. Then ask for another command.

If the user chooses exit, end the program

Extra Credit (10 points):

Modify problem 2 to allow for notes of variable length.