

MAT 120 — Project 2 — Fall 2018

Due date: Friday, Oct 12

Pd Assignments:

1. Create a Pd patch that plays an eight-note Just Diatonic scale with any starting frequency F . The notes should sound on the half second and have an envelope that lasts approximately one half of one second. The notes should be based on pure sine tones only.
2. Submit a copy of your Pd patch filename.pd on the web site.

Here is a summary of the logic for the patch:

- First, you will use a metronome to send out bangs to a loop which adds one, and then on to a mod function box which creates a cyclical pattern of output.
- These output values can be sent to a tabread box which uses them as indices with which to read values from a table.
- The table can be used to store values which signify different types of intervals. You can use any simple values to represent each of the types of intervals that you will need in the scale. The table then gives a sequence of these values to represent a pattern such as “whole whole half whole whole whole half”. But note that you have to account for different types of whole and half steps.
- Each type of whole or half step can be put into a message box as a fraction. The object that you need between the tabread and those message boxes is route. The route box will be used to convert your sequence from the table into the right type of message.
- The fraction can be converted to a decimal which becomes your frequency multiplier. The last steps need to take this multiplier times the previous frequency and then play this together with an envelope through the dac.
- The decimal output can be passed on to a trigger box which can be split into a bang and a float. The float can be used to update the frequency, and the bang can then be sent to the message to vline which implements the envelope.