

## CM3106 - Multimedia Coursework Plan

- Basic Requirements
  - Reading in an audio file
  - Compute it's underlying time-frequency distribution (short-term Fourier transform)
  - Interactive means of editing the spectrum
  - Playback of the edited audio (Need only be monophonic, one note at a time)
  - UI to play new sounds
  - Volume shaping/ envelope shaping to control or modulate sounds produced
  - Phaser
  - Flanger
  - Reverb
  - Vibrato
- Advanced Requirements
  - Looping Sections of audio
  - Reversing Sections of Audio
  - Polyphonic playback

No need to for an advanced GUI, whatever does the job.

### Basic Requirements

- |  |   |        |
|--|---|--------|
| 1. Get basic Read, edit file working                   | } | Week 1 |
| a. Read File   |   |        |
| b. Convert from audio to image                         |   |        |
| c. Implement image editing tools                       |   |        |
| d. Convert from image to audio                         |   |        |
| 2. Add Fourier transform to current code               | } | Week 2 |
| b. Whilst the audio file is being read in transform it |   |        |
| 3. Add Piano UI and Volume shaping/ envelope           |   |        |
| 4. Add Phaser, Flanger, Reverb and Vibrato Filters     | } | Week 3 |

### Advanced Requirements

- |  |   |            |
|--|---|------------|
| 1. Add looping section                               | } | Week 4     |
| 2. Add reverse section                               | } | Week 5     |
| 3. Polyphonic Playback                               | } | Week 6     |
| Buffer Time for potential overflow or extra features | } | Week 7 - 8 |