**Impromptune**

**Sprint 3 Planning Document**

**Team 5**

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1. Sprint Overview

The third and final sprint will focus on finalizing the project for presentation, fixing bugs, adding more generation options and make generation routine more robust.

Completed user functionality by end of sprint include:

* Professional Looking GUI
* Bug-free utility and user-friendly usage
* Able to modify loaded documents and save them again
* Ability to compose with MIDI keyboard(if possible)
* Generative options complete(GUI options)
* Incorporate Recent Files
* Fine-tune generative results
* Fix current generative bugs
* Evaluate adding notification for generating progress

**Scrum Master:** Jacob Richwine

**Meeting Schedule:** We will meet at least once a week on Tuesday/Thursday from 3 to 5.

**Risks/Challenges:**

* Limitations with fixing bugs due to previous Zong! project code.
* A major architectural change is needed to finalize the project
* Runtime of generation tasks increases beyond acceptable limits
* Generation of accompaniment complexity
  + Will it be pleasing to the human ear?
  + Not a ‘solved’ problem, results will be interesting to see/hear
  + Will different options create enough variety to be worthwhile

2. Current Sprint Detail

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| As a user, I would like to be able to compose via a GUI. | Estimated Time | Responsible |
| Finish GUI | 10 Hours | Chris |
| A fully debugged tab pane | 3 Hours | Chris |
| Prompt user to save on close | 2 Hours | Chris |
| Downscale piano, make all controls visible | 3 Hours | Chris |
| Apply CSS to GUI | 2 Hours | Chris |
| Dynamic, intuitive presentation of generation | 3 Hours | Chris |
| Design and implement Impromptune logo | 6 Hours | Chris |

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| As a user, I would like to have control over the generative patterns’ parameters. | Estimated Time | Responsible |
| Integrate user defined parameters to the analysis/generation | 5 hours | Ben & Sean |

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| As a user, I would like to produce input from a midi controller | Estimated Time | Responsible |
| Using jFugue, connect the piano interface on screen with the live midi controller. | 12 hours | Sean |

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| As a developer, I would like to analyze and generate music based on parameters. | Estimated Time | Responsible |
| Further develop the scoring algorithms - resolution scoring / harmonic weights | 5 hours | Ben & Sean |
| Develop more ‘rhythmic awareness’ / research possible hamming distance augmentation to HMM | 10 hours | Ben |
| Expand the core algorithm to consider more dimensions, improve sampling, integrate entropy / continue expanding the core music ‘mechanics’ in Virtuoso | 10 hours | Ben |
| Train the models based on multiple files to improve/bias the note / beat choices | 5 hours | Ben |

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| As a user, I would like to be able to edit / interact with the composition. | Estimated Time | Responsible |
| Implement Recent Files listing | 4 Hours | Jacob |

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| Continuing From Sprint 2 | Estimated Time | Responsible |
| Bug Fixes(Ties,Generation,XML Socket) | 10 Hours | Jacob & Ben |
| Re-save loaded Modified File | 20 Hours | Jacob |
| Testing | 4 Hours | Jacob & Sean |
| Make tempfile creation and music insertion more robust. | 5 Hours | Sean |

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| Miscellaneous Tasks | Estimated Time | Responsible |
| Create Final Presentation | 2 Hours | Jacob & Ben |
| Package Application into .exe or .jar | 3 Hours | Sean |
| If generation process requires waiting, show a notification of progress | 2 Hours | Jacob |

3. Backlog

**Functional:**

1. As a user, I would like to be able to re-generate pieces of previously generated patterns.
2. As a user, I would like to add dynamics to my music.
3. As a user, I would like a bug-free experience and user-friendly GUI
4. As a developer, I would like the music generation process to play live feedback when a user provides input via a MIDI device (If time allows).
5. As a developer, I would like to easily add new musical generation templates (if time allows).
6. As a developer, I would like to easily create new styles of music (if time allows).

**Non-Functional:**

1. We must be able to run this software on all operating systems.
2. The interface needs to be intuitive and allow experienced musicians sufficient control (simple suggestions that can be easily edited, to the note)
3. The application has a place to display current processing tasks (if time allows).