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

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

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

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

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,	10 hours	Ben

improve sampling, integrate entropy / continue expanding the core music 'mechanics' in Virtuoso		
Train the models based on multiple files to improve/bias the note / beat choices	5 hours	Ben

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

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

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).