Composition Software With a Focus on Teaching
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Abstract

A new, free software designed for amateur composers and music students requires a less powerful editing system and can incorporate learning tools to teach students composition without the aid of a teacher.

The goal of this project is to create a music editing software that can be used as a teaching tool for music theory students

Architecture
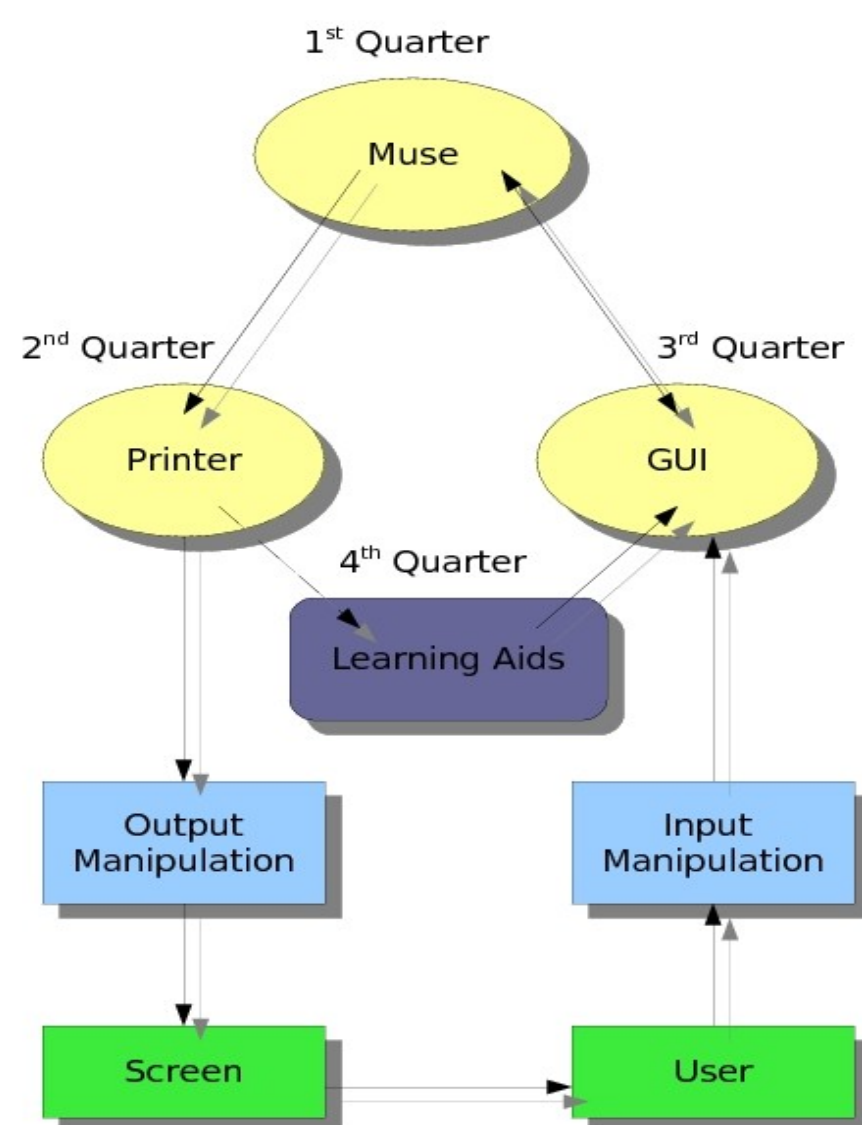
Design and Development

In order to make the program easily distributed over the internet, the program will be coded in Java, a widely distributed language.

The development process is a Staged Delivery, including several large releases with smaller updates between them.

Version System

The development system for this program has four major release versions, one for each quarter.

0.x – File input, ASCII output
1.x – File input, Graphics output
2.x – GUI input, Graphics output
3.x – GUI input, Graphics output, compositional tools, teaching aids

Expected Outcomes

A usable, free, intuitive program that can create and print simple to mildly complex melodies.

A series of lessons designed to teach composition students the basics of writing melodies.

The program will be tested by other students in the classroom to make sure that it meets expectations in terms of usability and simplicity.
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Background

Existing Software

Existing editing software falls into two major categories: compositional software and copying software with a focus on visual appeal.

Finale and Sibelius are two examples of compositional software. These programs are aids to composers to make writing music easier and nothing more.

Lilypond is a program that focuses on music copying and making computer printed scores as appealing as hand written scores. Lilypond, however, cannot be used to create or edit scores quickly or easily due to a complicated file input system.

The Need for Teaching

With the expansion of the internet, more and more prospective students are learning through the internet without the need for a teacher or textbook.

Many Do It Yourself training tools have been distributed over the web, but I have found no programs designed to teach composition students, only music students.

Sample GUI and Output
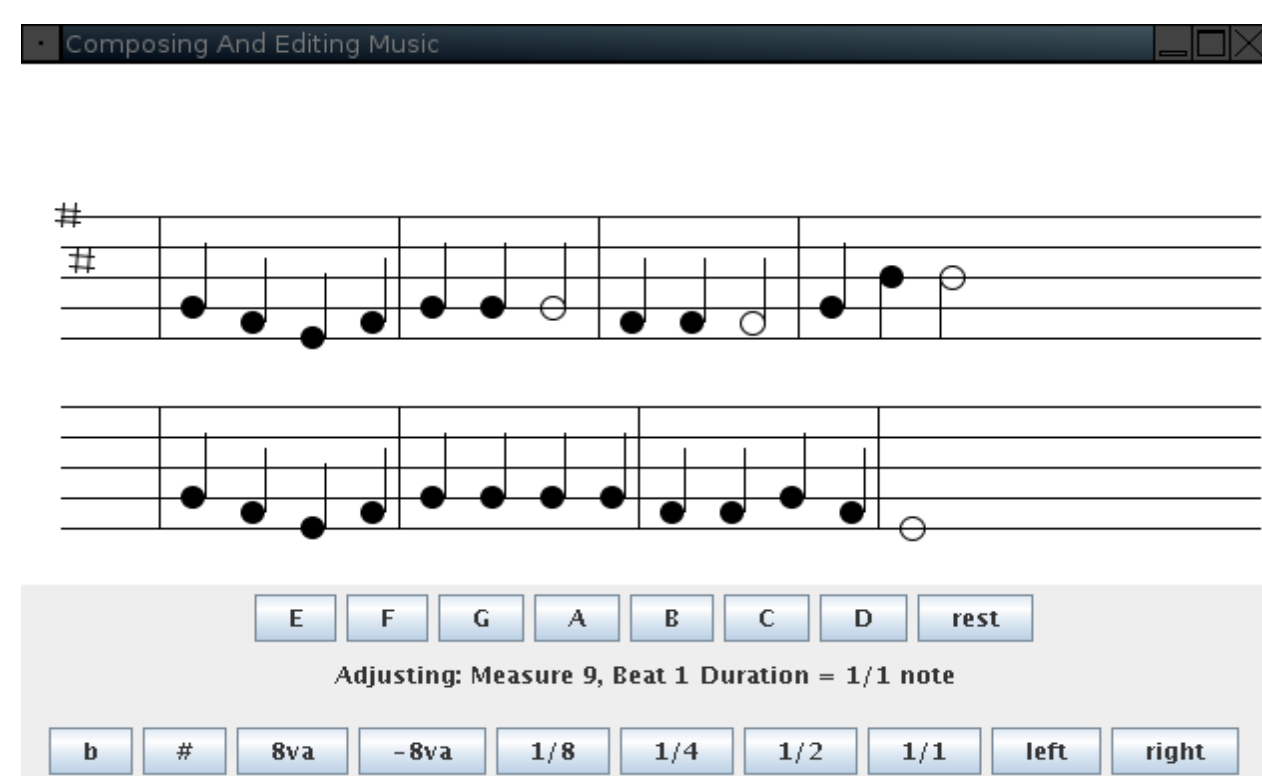
Class and Method Outline

Muse
•Creates the GUI and Printer objects
GUI
•Creates the GUI buttons
•Calls addNote in Printer when a button is pressed
Printer
•adds notes to the score matrix
•prints the score based on the score matrix.
Teacher
•Creates the buttons that control lesson choice
•Prints out the lessons
•Prints out the chord patterns

Sample path of input to output
•User presses a button, GUI recognizes it
•Converted to string, passed to addNote in Printer.
•Adds the string to the score matrix
•The score is printed by measure
•Each measure is printed by note
•The paint component update