HW4: You be the Composer

DUE DATE: Saturday February 23, 2008 7pm

For homework 4, you will be selecting a song of your choice (see below for some ideas). You will need to know the notes in the song that you choose. If you cannot or do not want to compose the music yourself, you should start by selecting sheet music for a song that piques your interest. Free sheet music can be found all over the internet (Google is your friend) but for two references we will give you are: http://www.musicnotes.com/ and http://freesheetmusic.net/.

Note: We are expecting music and not a random cacophony of notes. You will not receive full credit if you do not turn in music.

Music Theory 101
First you will need to create a class called `AdvancedSongPhrase` that will extend `SongPhrase` and only have the necessary riffs for your song. See the `SongPhrase` class for working examples. You must create at least four new riffs in this class and each riff must contain at least two measures or 8 notes.

Next you will need to create a new class (of some name of your choosing) with a main that will assemble your song and then open your song with `showFromMeOn` (or whatever you need to do open up the notation `View` on your masterpiece). Your riffs will be placed into `AdvancedSongNode`s which will then be assembled into a linked list, `AdvancedSongList`. You are required to use either `repeatNext` or `repeatNextInserting` method at least once, and you must also use the `weave` method at least once (the results of these method cannot be discarded). You may also add more methods if you desire but you will need to turn in the modified files.

Extra Credit (+10pts)
Add in another instrument to your song for extra credit. To add another instrument, you will need to use multiple parts. Make sure the instruments are different and the riffs they are using are different (So if you use piano first then use drums, a guitar, etc... and make the riffs different)

Good References
- http://en.wikipedia.org/wiki/Modern_musical_symbols - This page will describe notations used in sheet music. However, it does not go into detail on how to read the notes
- http://en.wikipedia.org/wiki/Music_notes#Written_notes - Describes the treble notes
- See `SongPhrase` for examples and what packages you will need to import.
- JMusic Reference: http://jmusic.ci.qut.edu.au/jmDocumentation/index.html

Some possible song ideas
- Topgun Theme Song
- Great Balls of Fire
- Danger Zone
- Holiday Songs
- Mission Impossible
- Phil Collins
- Star Wars Imperial March
- Bach
- Linus and Lucy

What to Turn In
- `AdvancedSongPhrase`
- Your song class
- Any modified source code files

Where to Turn In
- T-square