Cmp Sci 187: **Programming with Data Structures**

Discussion section: **Java Design/Practice:** *Designing a Digital Juke Box Application*

You probably have hundreds of CDs in your dorm, car, home and those that your friends have borrowed. You will design a digital juke box application that will allow you to organize all these and to learn your preferences so that when you want to listen to something the jukebox will play your favorite songs! Java has a comprehensive JavaSound API and along with Java Media Framework (JMF) it is possible to design a complete digital jukebox. For simplicity however, we will assume that songs are available as mp3 files along with additional information about the album name, artist name, and the genre of music.

1. Write a *skeleton* of the application for a very simple juke box that allows songs to be added to it. It has the functionality of displaying the list of songs it holds, playing a song, and stopping a song that it is currently playing.

2. Selecting a song form one giant list is inconvenient. We want the juke box to be able to list songs based on album, artist, and genre.

3. Now we want to make our player more sophisticated. We want it to learn the preferences of the user, assuming that it is a personal device. The lists that it displays can now be ordered by the user's preferences.