Database Project Proposal

THE LEFTOVERS MUSIC MANAGER

Group Members
Wilfredo Hernandez | Isaac Moreno | Andrew Pena | Mark Reyes | Richard Seddon

Who We Are

The members of our group are Wilfredo Hernandez, Isaac Moreno, Andrew Pena, Mark Reyes, and Richard Seddon.

Our group is called the Leftovers. We are comprised of 3 small groups that were left over in the class.

The working name of our application is the Leftovers Music Manager.

Application Overview

The completed application is expected to offer various tools for managing a music library.

The main purpose of the application is to display song data to a user. Upon login to the software the user will be presented with album art from the music in his collection. The user can then navigate through menus that will allow him to view all his/her songs or lists of songs that satisfy a certain query. From these views the user may then create playlists or export song data.

Leftovers will offer a Multi-User system where each user on a local machine will be presented with only the music that he or she has added to their customized profile. Users can access customized profiles by entering their username and password in the opening screen of the application. Following the login procedure, they will then be taken to a media page displaying cover art to the albums in their custom library. If a user wishes to see all songs available on the current machine, they may login into a Master Profile that is populated with all song data on the local machine. In the database layer of the application we intend to have users' customized profiles be represented by a set of tables that are populated by a master set of tables. The master set of tables is where song data is stored by default and where any changes to song data will occur.

The application will include an Add Music function. By clicking on Add Music a user may choose to add the song data for music located in a folder in his/her operating system. If the user is in a custom profile, then he/she may add music to his or her personal library by either opening a file in a folder or by searching the master list of music.

A Remove function will be present to allow users to completely remove music from his collection. Songs can be removed by song, album, or artist.

Various Update features will be included as well. Custom profiles can be updated manually to reflect changes to song data. Furthermore, username and password information attached to each profile may be updated as well.

Aside from the usual database type management features we will also include the ability to export playlists that can be used in popular media player software.

Technology Used

Leftovers will be built on top of the several highly tested and reliable technologies. The Java programming language will be used as the primary implementation language behind the application. The SQLite relational database management system will handle database needs for the project. The GUI for the project will be implemented in the Eclipse IDE using the WindowBuilder extension. WindowBuilder allows us to create a GUI for our program using a visual editor where GUI elements correspond to code in a chosen Java library. A Java API that interfaces SQLite with our GUI is currently being researched.

Member Roles

Roles in the project will be distributed so that each user will produce work in each layer of our application. We will be working collaboratively on the database, programming, and GUI aspects of the application. For example, when it is time to design our database each member of the group will create their own design. We will then meet up and gather all the good ideas from each member and ultimately create a database design that takes the best ideas from the group. The windows in our GUI will be created in a similar fashion. Every member in our group will be given a window in our GUI to design, they will create two styles, then we will decide on which design works best for us. Programming responsibilities will be distributed by function. Essentially each member will get the same number of buttons that he will have to write code for. As of this moment we are all currently working on researching a Java API to work with our database, as well as researching other software to give us ideas on what to work on.

Member Experience

The members of our team will be able to provide varied perspectives during the creation of the project. Wilfredo Hernandez has experience manipulating websites and working with HTML. Isaac Moreno has experience setting up a MySQL database and programming in Java. Andrew Pena can provide a design perspective on the project. Mark Reyes is primarily a Java programmer and can assist other members of the team with programming problems. Richard Seddon is also primarily a Java programmer whose experience will help us tackle our programming challenges. Overall our team is about a 50-50 split between visual and design oriented experience and programming and organization oriented experience.