Project Proposals and Teams

Introduction

You need to choose one of the two projects described in the following pages. The projects, in no particular order, are:

1. Book Net: A social network for selling, buying, lending, and discussing books.
2. Music Player: A music player that can share playlists with other friends.

I have formed the project teams. You can find your project team assignment on WebCT. Please hold a team meeting as soon as possible and choose a project that you want to work for the semester. If for some reason, you cannot agree with the team's choice and want to work on the other option, please find another person/team and swap teams. I expect both options to be equally popular so people changes should not create an overall project team assignment problem.

Each project has an additional part that can be include for extra credit. The weight of the extra credit portion will be announced later.

Project 1. Book Net

Introduction

A student can expect to spend several hundred dollars on textbooks each semester. One way of reducing this expense is to buy used books or share books among friends. There are many sources to buy used books. Often, slightly older editions of a textbook can be used instead of buying the newest edition at high cost. The booknet is a social network of students that is setup to facilitate buying, selling, and lending used books. This network can also be used to discuss and rank books. This can be a valuable feedback for professors who would like to take the popularity of books in their adoption decisions.

The Customer

McGill students should be target population of customers. It is highly preferred to recruit students outside the software engineering class as customers.

Problem Description

The basic component of the *Book Net* is a simple online social network. This online social network should allow users to create a profile page and upload some contact information including email and phone numbers.

On top of the basic social network, you need to provide a book buying, selling, and lending service. Using this service, a user should be able to post her books for sale. Some books can be optionally made available for lending (letting another friend use it for a semester). When a user posts a book for sale, she should be able to select whether lending is available on the book. The lending information might only propagate among friends and friends-of-friends (i.e., the user may not want to lend a book to an unknown student).

The last component of the Book Net is a discussion facility. This is almost like a blogging tool that can be used to comment on each posting for book. It is suggested that these posts should be indexed (associated) with a particular book title. For example, a book on Operating systems could be posted by several students and the comments should apply for all of them.

As most online social networks, Book Net is a web-based platform. This involves connecting to databases and using them to store user, book, and discussion related information. Although the aesthetic design of the web presentation layer is not a concern, it is advised to use current best practices to develop a system with a user-friendly interface.

Additional Part

While the discussion facility associates textual material with each book, it is often useful to see ratings. The ratings can be given in a scale of 1 to 5. The ratings should aggregated with the comments and displayed for each book. The seller is not rated.

Project 2. Music Player

Introduction

This project is concerned with building a simple music player that can be used by a user to play music files that are stored in a local hard drive. This desktop application allows cataloging music files in different ways (e.g., using tags that could be extracted from the meta information of music files or provided by the user), selecting and playing a given music file, and browsing the collection of music files. In addition to playing and cataloging the music files the player should allow the creation of playlists which is a batch of music files the user wants to play in sequence or random order. While the music player is desktop standalone application, there is a simple server that is used to interconnect the music players so that they could share playlists of popularity of music files.

The Customer

The customers of this project are people interested in a free, small, simple music file player that can have this networked mode. You need to recruit some student volunteers (outside the class) as customers and use their feedback at various stages of the project.

Project Description

This music player is a desktop application that provides a simple facility for maintaining and playing large collections of music files. The music player should show music files by song title, album, or artist. (Preferably multiple attributes shown for a music file.) The music player should make it very easy to add songs to the existing collection. The music player includes a user interface that displays all the features of the player, and easily accessed documentation on how the player works. The player includes standard features found in a media player, like start, stop, pause, skipping forward and back, and volume control. Also included is a search feature that lets the user find an album, song, or artist quickly. The player should also be able to playback multiple audio formats such as mp3, wav, flac, etc.

Additional Part

Once the basic features are met, the playlist creator that can be added. This allows people to make their own album of existing songs to be played at their request. Another feature would be a including pictures with the user interface for CD covers, to make the user's collection easier to look through. One more feature is an editing tool that would allow the user to change the name of an album or song, if one is not provided.