CECS 343 Semester Project Requirements Iteration 3

Now with basic functionality in place, Iteration 3 looks to refine that functionality. New requirements are:
1) Take the "File" column out of the library display (it may remain in the table, just don't display it)
2) Make the "Title" column permanent - that is, always displayed.
3) Columns "Album", "Artist", "Year", "Genre" and "Comment" are to be made selectable (displayed or not). This is accomplished through a context sensitive popup menu accessed by right clicking the table headers. Each of the selectable fields are listed (permanently) in the popup and each has a "checkbox" next to the column name. A "checked" checkbox means the column is displayed, and an "unchecked" checkbox means the column is not displayed.
4) Clicking on the column name in the popup toggles the column to display or not.
5) The column configuration must persist between Playlists and Library (that is, have the same configuration) and must persist from session to session - the application must display the same configuration on starting as it had on the previous session when closed.
6) Default sorting is on "Title". Sorting is possible on all columns.
7) Two timers and a progress bar must be displayed. Location of these elements is at your discretion, but the three elements must be side by side.
   a) The "left" timer displays elapsed time since the song began playing, in H:MM:SS
   b) The "right" timer displays the song's length minus the elapsed time, in H:MM:SS
   c) The progress bar (length, style, color also at your discretion) moves along with the passing of time as a song plays. At the commencing of play, the bar is "empty". The "ticks" need not be uniform but something approaching uniform. When a song is completed, the bar should be filled and then returned to empty.
8) A "Controls" menu is added. It contains the following commands:
   a) "Play" - selecting this plays the currently selected song. If no song is selected, play the first in the library. If "Shuffle" is on, play a random selection. Accelerator key is "Space".
   b) "Next" - plays the next song in the library. Ties to the "Skip Forward" function. Accelerator key is "Ctrl-RightArrow".
   c) "Previous" - plays the previous song in he library. Ties to the "Skip Backwards" function. Accelerator key is "Ctrl-LeftArrow".
   d) "Play Recent" - a submenu appears upon mouse over of "Play Recent" and displays up to the last ten songs played by overt selection (click song/play, click "Skip" forward or backward). Selecting a song from the list plays the song and puts it in "Recent Play" list again. Songs played by "Shuffle" are not put in the recent play list. If less than ten songs are have been played, display as many as have been played. Recent Play list must persist the session. (The same songs must be in the list at startup as was in the list at shutdown.)
   e) "Go to Current Song" - highlight the currently playing song and scroll the screen to insure that song is visible. If no song is playing, but one is selected, scroll the screen to insure it is visible. If no song is selected, do nothing. Accelerator key is "Ctrl-L".

f) A separator.
g) "Increase Volume" - ties to the volume slider. 5% increase for each click. Accelerator key is "Ctrl-I". (Slider must move as volume increases.)
h) "Decrease Volume" - ties to the volume slider. 5% decrease for each click. Accelerator key is "Ctrl-D". (Slider must move as volume decreases.)
i) A separator.
j) "Shuffle" - with a checkbox. Checkbox not selected, command has no affect. Checked, the command picks a song at random from the library and plays. If a song is currently playing, command has no effect until current song completes. Shuffle continues to randomly select and play until unchecked. Unchecking has not effect on currently playing song. No Accelerator.
k) "Repeat" - repeat the currently playing song forever. If no song is playing, repeat forever the next song that is played. Turning off "Repeat" ends the effect after the currently playing song ends. No accelerator.

You will need callback functions from the player to accomplish "Shuffle". They help on the timers and progress bar as well.

Create Use Cases for items 3 to 7. Create user stories for items 8.a through 8.c and 8.e through 8.k. Create a use case for 8.d.

Due Thursday, May 5, 10:30am (Last Lab Period)