

With the coding assignment, a struggle I encountered was understanding the difference between protected, private, and public variables. When trying to implement the methods into my BetterLinkedList.java file, I would get errors with the variables in my LinkedList.java file since they were all instantiated as private (meaning they were only accessible in that class). To fix this, I changed all of them to protected (allowed to be accessed outside the class). This way, I was able to call on variables such as head, node, and data when implementing the swap, swapWithNext, and sort methods.

For my extension, I chose to implement the add 5 random songs. It was interesting and challenging because I had to learn how to program the GUI inside the MusicPlaylistManager.java file. Even with trial and effort I wasn't able to get my button to fully work. Currently, I'm getting the following error: "Exception in thread "AWT-EventQueue-0" java.lang.UnsupportedOperationException: Unimplemented method 'getRandomSongs.'" I've tried researching this and fixing it but I'm unable to so I hope to fix this over the weekend and resubmit it with a fully working extension.

This project was really fun and I was able to learn a lot of crucial knowledge from it. I'm going to try to continue to work on this project and to implement an API key from Spotify to download and play actual playlists (it might take a while since I have to first get familiar with how API keys work).

Overall, I learned the following skills with this project, making it extremely valuable and worthwhile:

1. How interfaces work (Comparables)
2. How Model View Controller (MVCs) architectures work
3. How Java GUIs are built and operate
4. Bubble Sort