

CIS 3515 Assignment 10

Instructions: Create a branch of your previous app and update it with new features.

The current version of your application has a few shortcomings:

1. **It can only stream audiobooks** – this is problematic because it requires an internet connection whenever a user wants to listen to a book and also wastes data when a user wants to listen to a portion of the book that they've already heard. It also consumes server resources.
2. **It does not preserve the users current position in a book** – If the user exits and restarts the main activity, or if they start listening to a new book, the last position in the previous book is lost, and the user has to start over from the beginning and manually attempt to find their last position when they go back to that book.

The application will be updated to address the issues described above in the following ways:

1. Whenever a user begins to Play a book, your app should
 1. Determine if the book has been previously downloaded
 1. If the book has not been downloaded
 1. Stream the book as usual (just like previous assignment)
 2. Simultaneously begin to Download the book in the background using the API provided in the Appendix
 2. If the book has been downloaded, play the book from the downloaded source instead of streaming it
2. Whenever a user pauses a book, or starts playing a book while another book is being played, the application must save the current position of the last book. When the user attempts to start playing that book again, it should continue playing from the last position the user stopped. Note that if the user hits the Stop button on any playing book, the previously saved position should be discarded, and if they attempt to start playing the book again it should start playing from the beginning.
3. If the user performs a search for books and then exits and reopens the main activity, the application must keep track of the previous list of searched books and display them automatically. For example, if the user performed a search where 2 books were returned, the application should continue to display only those two books until another search is performed, regardless of if the activity is destroyed in any way, including closing the application entirely and then reopening it.

NOTES

To be clear, based on the specifications, your application should only start a book from the previously saved position if the book is being played from a local file. If it is being streamed, it should always start from position 0.

The API for downloading an audiobook will provide the data in the MP3 format. This is a binary file format, and is not text data as you would have used in previous assignments.

Appendix

Audio Book Player API

Download the file associated with a specified book ID in a supported audio format:

<https://kamorris.com/lab/audlib/download.php?id=<book id>>

Rubric

Application can download audiobooks if no local copy of book exists	25%
Application keeps track of books returned from last search, even after activity restart	25%
Book progress is saved when a book is paused	10%
Book progress is saved if a new book is started while another book was previously playing	10%
Pressing Stop when a book is playing resets its saved position to 0 seconds	10%
Application plays downloaded version of audiobook if available, or it streams if not	10%
Book plays from previously saved progress if downloaded, but starts from 0 if streaming	10%