CT60A5103 Software Engineering Models and Modeling

ANALYSIS OF SPOTIFY

Views and Communication Diagram

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Views and View-related data objects

For this assignment, we'll focus on Spotify as the competing media streaming app for AudioNow. We have identified 4 different views, each presenting a unique interface and associated data objects.

First, upon opening the app, we will be at the Home View. It displays recently played music, suggested playlists, popular albums, and trending songs. The data objects are the metadata (names, authors, length, cover arts, etc.) of those playlists and songs.

Next, to the right of the Home View is the Search View. It is responsible for querying the database for specific items, such as playlists, songs, or podcasts. The data objects are the query results and the metadata of items in those results.
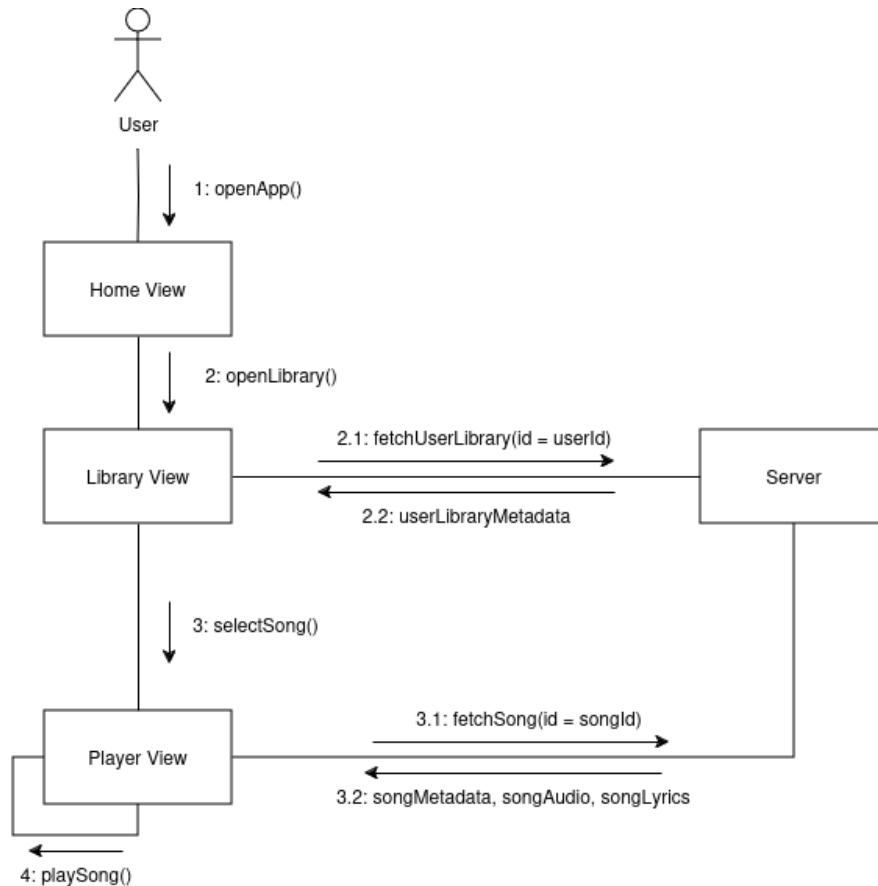
On the right most side is the Library View. It displays user's saved songs, playlists, liked tracks, and favorite podcasts. The data objects are the metadata of those items in the library.

The last important view is the Player View, which is always present at the bottom of the screen. It shows the current song in the queue, either being played or paused. The data object is the audio content, the metadata of that song and the action buttons (play, pause, skip, shuffle, etc.).

Data Used or Transferred

We managed to identify four main categories of data used and transferred by Spotify. The first one is playlist data. When the user selects a playlist, the app transfers the metadata related to it and the songs inside back to the user. Next, we have the metadata of the song itself, which the app returns when the user selects a song. Additionally, we have the audio stream data, which is fetched whenever the song switches from pause to play mode. Finally, we have the user's data, including preferences, recently played items, and other personalization settings.

Use Case Scenario: Playing a Song from the Library

The diagram shows the interaction between the user and various Spotify app views as the user plays a song. First, the user opens the app, appearing at Home View, then navigates to the Library View, where they access their saved songs. The Library View fetches the user's playlists and metadata from the server using their user ID. Once the user selects a song, the Player View requests the song's data from the server. The Player View then plays the song, displaying all relevant details. This diagram captures the flow of data and view transitions while highlighting how the server handles key data exchanges to provide the media content.

DECLARATION OF AI USAGE

ChatGPT was used for generating ideas for the scenario and proofreading the whole document.