Music Player

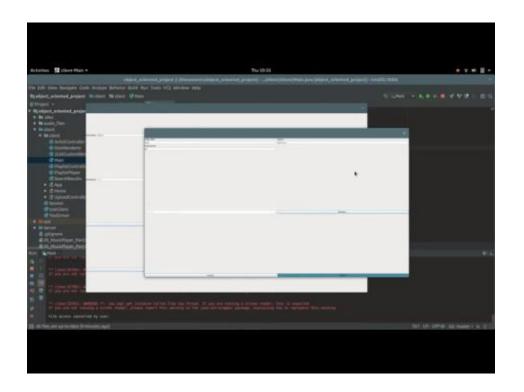
Team 5

Team:

- Scott Young
- Amjad Alharbi
- Joe Alsko
- Jonah Jacobsen

Project Summary: A simple Music player system that allows users to listen to their favourite songs, create and edit their own playlists.

Demo1 - Add songs to DB as admin



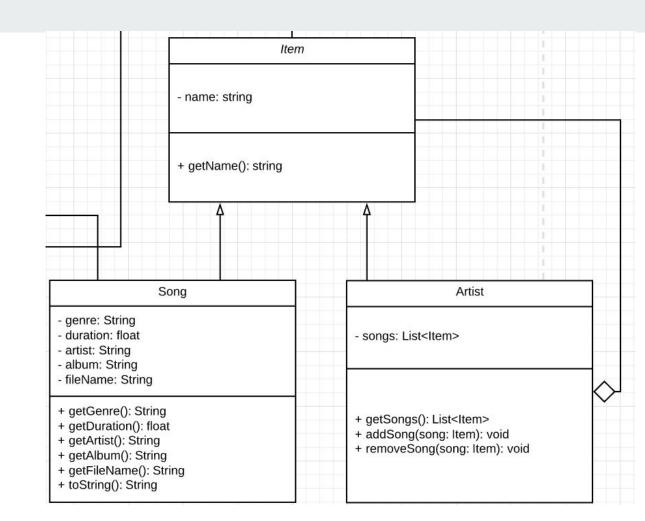
Demo2 - Add song to Playlist, then play it



Design Patterns:

<u>Composite</u>: To better search our list of songs and artists, we used the composite pattern to reference artists and songs simultaneously, while also using a list containing the Item class to keep track of an artist's existing songs.

Class Diagram



Design Patterns:

<u>Singleton</u>: We used the singleton pattern for our audio player class and database manager class. There should only be one audio player and one database manager at any time, so this pattern seemed appropriate.

Class Diagram:

DBManager

- items: List<Item>
- instance : DBManager
- + search(searchText): List<Item>
- + addSong(Song, Artist, Account): void
- + removeSong(Song, Account): void
- searchExact(searchText): Item
- searchExactArtist(searchText): Artist
- searchExactSong(searchText): Song
- addItem(item: Item): void
- getInstance(): DBManager

Player

- currentSong: String
- nextSong: Song
- currentPlaylist: Playlist
- positionInPlaylist: int
- playStatus: String
- instance: Player
- + playPlaylist(playlist: Playlist): void
- + playPlaylist(playlist: Playlist, index: int): void
- + playSong(song: Song): void
- resumeSong(): void
- + pauseSong(): void
- + skipForward(): void
- + skipBackward(): void
- playPlaylistSong(): void
- getInstance(): Player