Group01

Music Player Use Case Specification

Version 1.1

Music Player	Version: 1.1
Use Case Specification	Date: 15/07/2022

Revision History

Date	Version	Description	Author
23/06/2022	1.0	Initial version	Trần Thiện Tiến
			Phạm Ngọc Anh Thư
15/07/2022	1.1	Additional version:	Trần Thiện Tiến
		 Modify Use Case model Add more use case specifications 	Phạm Ngọc Anh Thư

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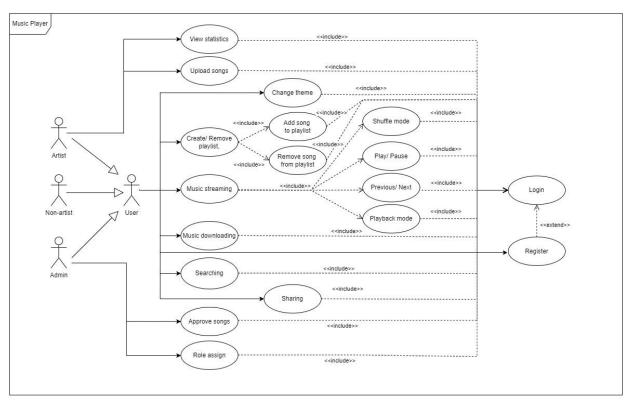
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Use Case Specification (Small Project)

1. Use Case Model:



2. Use Case Specification

2.1 Login Use Case

Use Case ID	U001
Use Case Name	Login
Summary Description	Allow users to login into the system
Actor(s)	Artist, Non-artist, Admin

Basic Flow

- 1. User opens Music App on mobile phone
- 2. The application shows login form
- 3. The actor enters their username and password
- 4. The actor presses a login button to send information (username/password) in the form to system
- 5. The system validates the entered username and password
- 6. The system notifies the actor to sign in successfully, switching the screen to the main menu then.

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Step	Description	
4	4.1. Actors can press enter on the keyboard to send information (username/password) to the system.	
6	6.1. The system cannot find the username and password in the database, an error message is displayed 6.2. Back to step 3.	
Pre-condition		
- None		
Post-condition Post-condition		
 The user is successfully logged in and the system displays a homepage based on actor type The system can't validate the username/password and displays the corresponding error. 		

2.2 Registration Use Case

Use Case ID	U002
Use Case Name	Registration
Summary Description	Allow users to create an account on the system
Actor(s)	Artist, Non-artist, Admin

Basic Flow

- 1. On the **Sign In** screen, the user selects **Sign Up**
- 2. The user types username and password
- 3. The user chooses **Submit** button
- 4. The system validates the entered User Account information
- 5. The system sends information to the database to be added, using MySQL query to insert Account table.
- 6. The system obtains the status of active from database
- 7. The system informs user that account has been created
- 8. Application automatically log in with registered information and switch to the home screen

Step	Description		
	At any time, the User can choose the left arrow icon on the left corner of the screen to return to the Login screen.		
4a	4a.1. Users lose their network connection or weak signal 4a.2. Error display notifying the user to check the stable network connection and try again later		
5a	5a.1. The system notifies user that account has already existed, 5a.2. The system asking the user if they want to log in instead or re-enter other information 5a.3.a.1. User choose login 5a.3.a.2. Application switch to log in screen with autofill username 5a.3.b.1. User re-enters information		

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Pre-condition

- None

Post-condition

- The user's details are stored in the database.
- The user entered successful information and is returned to the home page as a Logged In User
- The User entered invalid data or choose to cancel the account creation request. In either case, no account will be created

2.3 Music downloading Use Case

Use Case ID	U003
Use Case Name	Music downloading
Summary Description	Allow users to download a song on the system
Actor(s)	Artist, Non-artist, Admin

Basic Flow

- 1. On the Homepage screen, the User selects Search icon
- 2. User types title, artist, album, or genre for searching song
- 3. The system searches for the song in the database.
- 4. The screen displays suggested songs for the user
- 5. The user chooses a song.
- 6. The application shows the list of works to do with that song.
- 7. The user presses the download button.
- 8. The user tracks the progress bar to know when the song is finished downloading.
- 9. The song is downloaded to user's devices.

Alternative Flow

Step	Description
5a	5a.1. The system cannot find the songs in the database or there is something wrong with the download process. 5a.2 Alert the bug.
7a	7a.1. The song already exists, the done mark display replaces the download icon
9a.	9a.1. The user chooses to stop downloading 9a.2. Download cancellation notification screen

Pre-condition

- Users must be logged in..
- The storage on the device has enough space to store songs.

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Post-condition

- Song is downloaded to user devices.
- The system detects errors and displays the corresponding error.

2.4 Searching Use Case

Use Case ID	U004
Use Case Name	Searching
Summary Description	Allow users to search for songs/ artist/ non-artist
Actor(s)	Artist, Non-artist, Admin

Basic Flow

- 1. On the homepage screen, the user opens the search box and fills in the song/artist/album.
- 2. User presses the magnifying glass icon.
- 3. The system searches for song/artist/album in database.
- 4. Searching successfully and user receive song's/user's information on screen.

Alternative Flow

Step	Description
2a	2a.1. Actors can press enter on the keyboard to send a search request to the system.
4a	4a.1. The system cannot find the song/user's information in the database, an error message is displayed 4a.2. Back to step 1.

Pre-condition

- Users must be logged in.

Post-condition

- The information shows on screen clearly, and is easy to understand.
- The system can't find out the user/ song's information: alert and displays the corresponding error.

2.5 Sharing Use Case

Use Case ID	U005
Use Case Name	Sharing
Summary Description	Allow users to share songs to social network.

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Actor(s)	Artist, Non-artist, Admin
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- 1. The user chooses a song
- 2. The user chooses three-dot icon at the right bottom in Music Listening screen.
- 3. The application shows the list of works to do with that song.
- 4. The user presses the **sharing** button.
- 5. The user chooses one type of social network to share.
- 6. The application switches to the corresponding social network authorization screen
- 7. Authorization accepted by user
- 8. The song is shared on user's social media.

Alternative Flow

Step	Description	
6a	6a.1. The system makes user to login to that social media.	
6b	6b.1 There is something wrong in the sharing process. 6b.2 The system alert for the user 6b.3 Back to step 2.	
7a	7a.1 Authorization declined by user 7a.2. Go back to the app screen and the song is not shared	

Pre-condition

- Users must be logged in.
- Users search for music based on Searching use case
- Users select music in a created playlist

Post-condition

- The user is successfully sharing songs on social media.
- The system can't share songs and displays the corresponding error.

2.6 Approve Use Case

Use Case ID	U006
Use Case Name	Approve
Summary Description	Allow admin to approve songs uploaded by the artist.
Actor(s)	Admin

Basic Flow

- 1. The Artist sends an uploaded song request.
- 2. The admin receives notification.
- 3. The admin checks the content of the artist submitted is complete

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- 4. The admin sends information to the censorship department.
- 5. The censorship department allows song release, and feedback to the admin.
- 6. The admin recognizes the information and notifies to artist

Alternative Flow

Step	Description	
4a	4a.1. The admin recognizes the artist's information submitted incomplete or incorrect 4a.2. The admin responds to the artist to check again 4a.3. End use case	
5a	5a.1. Song does not pass censorship, the censorship department feedback to admins is not granted upload permissions 5a.2. The admin recognizes the information and notifies to artist	

Pre-condition

- Admin must be logged in.
- There is a request sent to Admin.

Post-condition

- Admin allows: the request will be executed (song will be uploaded to system).
- **Admin denies**: the request will be ignored. The song is not uploaded or restricted to certain countries or ages

2.7 Role Assign Use Case

Use Case ID	U007
Use Case Name	Role Assign
Summary Description	Assign a role to user (non-artist or artist)
Actor(s)	Admin

Basic Flow

- 1. The user sends an artist role request.
- 2. Admin receives the notification
- 3. The admin checks out the user's previously made products.
- 4. The admin assigns artist role to user
- 5. The admin notifies user and let him/she know that he/she can use artist features.

Step	Description
4a	4a.1. Admin ban an account: the account will be blocked for limited or unlimited times. 4a.2. Admin assign limited artist feature for user: the system just allows user to upload music, view statistics,

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4b	4b.1. The admin does not assign the artist role because it does not meet standards 4b.2. The admin notifies user
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Pre-condition

- Admin must be logged in..
- There are users in the system.

Post-condition

- The admin approved artist role for user.
- The admin doesn't approve artist role because the user does not meet standards

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2.8 View Statistic Use Case

Use Case ID	U008
Use Case Name	View Statistic
Summary Description	Allow artists to track how well their music is resonating with listeners, and measure the impact of their marketing efforts.
Actor(s)	Artist

Basic Flow

- 1. Click on the name in the top right corner of the application
- 2. Choose **Profile**
- 3. System direct your screen to **Profile** Screen
- 4. Choose Audience
- 5. The Audience section displays a timeline of your total numbers of listeners, streams, and followers

Alternative Flow

Step	Description
4a	4a.1. Artist chooses Source of Streams chart 4a.2. The chart shows what percentage of total streams are coming from what source on Music App (like directly from your artist profile page or from one of our editorial playlists)

Pre-condition

- Music App needs to be installed before.
- User is logged in
- User opens homepage
- The artist role was approved by Admin
- User needs to upload at least 1 song to view statistics

Post-condition

- The user understands a number of listens from all ages and countries

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- The user couldn't see the statistics because no songs had been published.

2.9 Upload Music Use Case

Use Case ID	U009
Use Case Name	Upload Music
Summary Description	Allow uploads songs to Music App
Actor(s)	Artist

Basic Flow

- 1. The Application prompts the artist for song location, song title, and relevant information.
- 2. Artist enters song location, song title, and relevant information.
- 3. Artist indicates that he/she has finished entering song information
- 4. Artist chooses Submit button
- 5. Admin verifies song location provided by Artist and song size.
- 6. Admin sends song information to the database to be added, using MySQL query to insert Songs table.
- 7. Admin obtains the status of add from database
- 8. Admin informs Artist of upload status
- 9. Artist goes to look at the song in the list of uploaded songs, and now they can tell their friends/audience about the song and to check it out.

Step	Description
1a	1a.1. The user is not logged in or gave an invalid username and password 1a.2. User is sent back to the login page and prompted to give their user information.
1b	1b.1. The upload song feature is disabled for some reason. 1b.2. The user contact to admin for further information.
2a	2a.1. Artist does not fill in relevant song information 2a.2. The system ignores this and continues.
2b	2b.1. Song is duplicated of an existing song. 2b.2. Artist is informed of the conflict and re-prompted to enter new unique information
4a	4a.1. The song retrieved exceeds the maximum song size. 4a.2. Admin informs the artist that song exceeds maximum song size 4a.3. Admin trims the song to the maximum length and accepts it.
4b	4b.1. Artist enters invalid song location 4b.2. System informs artist of invalid location and prompts artist to re-enter location before continuing
5a	5a.1. Database is running slowly due to lots of connections 5a.2. System informs Artist of the delay and shows a progress bar. 5a.3.1. Artist accepts waiting. 5a.3.2. Admin cancels music upload if the artist doesn't want to wait any longer

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Pre-condition

- Music App needs to be installed before.
- User is logged in
- The artist role was approved by Admin
- User chooses the **Upload** section on the homepage.

Post-condition

- The song will be displayed in the application's main song library to all users.
- The song will not be displayed or restricted because of violating community standards.

2.10 Change theme Use Case

Use Case ID	U010
Use Case Name	Change theme
Summary Description	Allow user to change the theme color of the toolbar
Actor(s)	Admin, Artist, Non-artist.

Basic Flow

- 1. On the homepage screen, the user chooses the name/avatar in the top right corner of the application
- 2. The user chooses **Setting.**
- 3. User scrolls down the **Setting** screen and chooses **Theme**
- 4. A **Theme setting** dialog box pops up.
- 5. User chooses one of eight colors for users provided by the application.
- 6. The selected color is updated to the background of the toolbar.

Alternative Flow

Step	Description
1a	1a.1. The user is not logged in or gave an invalid username and password 1a.2. User is sent back to the login page and prompted to give their user information.

Pre-condition

- The user is logged in.
- The user makes sure to update the app to the latest version to get full of theme colors

Post-condition

- The user successfully changed the theme color
- The user does not change and still use the old theme

2.11 Create playlist/favorite songs Use Case

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Use Case ID	U011
Use Case Name	Create playlist/favorite songs
Summary Description	Allow users to create their own favorite song list or lists by genre of music
Actor(s)	Admin, Artist, Non-artist.

- 1. On the homepage screen, select **Your Library.**
- 2. Tap Create Playlist
- 3. In the pop-up window, the user types in a name for playlist
- 4. The user hits **Create**
- 5. In the next window, the user tap button **Add Songs**
- 6. The user can search songs by title, artist, or genre
- 7. The user chooses the plus sign to the right of the title.
- 8. The song was added to the playlist

Alternative Flow

Step	Description
1a	 1a.1. On the listening music screen, the user taps the three dots icon on the top right. 1a.2. A menu with many options pops up 1a.3. The user choose Add to playlist 1a.4. The user selects name of the playlist which the user wants to add
5a	 5a.1. The user goes back to the homepage and chooses Search icon 5a.2. Enter title, artist, or genre to search songs 5a.3. For every song the user wants to add to the playlist, the user chooses the arrow on the right of the title. 5a.4. Choose Add to Playlist 5a.5. The user selects name of the playlist which the user wants to add

Pre-condition

- The account is logged in.

Post-condition

- User creates a list of songs with his/her favorite songs
- Users cancels or deletes the created playlist at any time

2.12 Music Streaming Use Case

Use Case ID	U012
Use Case Name	Music Streaming
Summary Description	Allow users to enjoy the music

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Actor(s)	Admin, Artist, Non-artist.
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- 1. On the Homepage screen, the User selects **Search** icon
- 2. User types title, artist, album, or genre for searching song
- 3. The system searches songs on the database based on the words the user types
- 4. The screen displays suggested songs for the user
- 5. User chooses a song
- 6. Music streaming screen appears and automatically plays music

Alternative Flow

Step	Description
1a	1a.1. On the Homepage screen, the user chooses recommended songs displayed classified by genre 1a.2 Music streaming screen appears and automatically plays music
1b	1b.1. On the Homepage screen, the user selects Your Library section 1b.2. The user chooses a created playlist. 1b.3. Music streaming screen appears and automatically plays songs in playlist
3a	3a.1. The user loses network connection or weak signal so the system cannot retrieve database 3a.2. Error display notifying the user to check the stable network connection and try again later
5a	5a.1. User doesn't see the song he/she is looking for 5a.2. The user exits the main screen
5b	5b.1. The user doesn't see the song he/she is looking for 5a.2. The user tries to search for another song, back to step 2 in Basic Flow

Pre-condition

- The account is logged in.
- Account is not banned by the admin.
- Songs the user is looking for are not banned in their country.

Post-condition

- Users stream music successfully, and the music still plays automatically even when the user closes the app or turns off the phone (except power off)
- Users don't stream music because they can't find their favorite song.
- The user's speaker device is damaged, so it is impossible to stream music

2.13 Add song to playlist Use Case

Use Case ID	U013	
Use Case Name	Add song to playlist	
Summary Description	nary Description Allow users to add a specific song to a specific playlist.	

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Actor(s)	Admin, Artist, Non-artist.

- 1. On the homepage screen, select Your Library, open List song.
- 2. Tap the three dots icon of any song needed to add to the playlist.
- 3. In the pop-up window, the user can find the option Add to playlist.
- 4. The user hits the option **Add to playlist**
- 5. Another pop-up window shows up and lists all user's existing playlist.
- 6. The user can choose a playlist, tap it to add selected songs to that playlist.

Alternative Flow

Step	Description
1a	 1a.1. On the homepage screen, select Your Library, open List Playlist. 1a.2. User tap to open any existing Playlist. 1a.3. The user chooses the button Add song to playlist.
1b	1b.1. On the search bar , users search for a specific song by typing song's name.
2a	2a.1. Page Add songs show up lists of online/ personal/recently/Upload(for Artist use) songs and a search bar for searching songs by name.
3a.1	3a.1.1 User scroll list song to find the specific song to add.
3a.2	3a.2.1 User searches for a specific song by typing the song's name on the search bar.
4a	4a.1. Users add songs to the playlist by the plus button beside the title of the song.

Pre-condition

- The account is logged in.

Post-condition

- The specific song is added to the specific playlist.
- Users remove the song from playlist at any time

2.14 Play/Pause Song Use Case

Use Case ID	U014	
Use Case Name	Play/ Pause song	
Summary Description	Allow users to play/pause song while song is streaming	
Actor(s) Admin, Artist, Non-artist.		
Basic Flow		
1. On the homepage screen, select Your Library , open List song .		

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- 2. Tap any song or button play all songs to stream songs/list songs.
- 3. By default, the song is played after tapping.
- 4. The user can pause/play a song by tapping the button play/pause in the center of the screen.

Alternative Flow

Step	Description	
1a	1a.1. On the homepage screen, select Your Library , open List Playlist . 1a.2. Users tap to open any existing Playlist and the list song shows up.	
1b	1b.1 Open the search bar and search for a specific song/playlist by name.	

Pre-condition

- The account is logged in.
- There is a song streaming.

Post-condition

- The song stops playing by the tap **Pause** and there is no sound left.
- The song continues playing by the tap **Play** and users can hear the sound of the music coming out and play the part that stops before, not playing from the beginning of the song.

2.15 Previous/Next Song Use Case

Use Case ID	U015
Use Case Name	Play Previous/Next song
Summary Description	Allow users to play the previous/next song.
Actor(s)	Admin, Artist, Non-artist.

Basic Flow

- 1. On the homepage screen, select **Your Library**, open **List song**.
- 2. Tap any song or button **play all songs** to stream songs/list songs.
- 3. By default, the song is played after tapping.
- 4. The user can play the previous/next song by tapping the button left-arrow/right-arrow on the screen.

Alternative Flow

Step	Description	
1a	1a.1. On the homepage screen, select Your Library , open List Playlist . 1a.2. Users tap to open any existing Playlist and the list song shows up.	
1b	1b.1 Open the search bar and search for a specific song/playlist by name.	

Pre-condition

- The account is logged in.

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Use Case ID	U015
Use Case Name	Play Previous/Next song
Summary Description	Allow users to play the previous/next song.
Actor(s)	Admin, Artist, Non-artist.

- User is streaming list songs.
- Play previous song case: there is another song above the streaming song in the list song streaming. (The current song is not the first song on the list). If not, there is nothing happening by the action tap play previous song button.
- Play next song case: there is another song below the streaming song in the list song streaming. (The current song is not the last song on the list). If not, there is nothing happening by the action tap play next song button.

Post-condition

- The previous/next song (in list) playing.

2.16 Playback Song Use Case

Use Case ID	U016
Use Case Name	Playback song/ list of songs.
Summary Description	Allow users to playback song/list of songs while song/list songs is streaming
Actor(s)	Admin, Artist, Non-artist.

Basic Flow

- 1. On the homepage screen, select Your Library, open List song.
- 2. Tap any song or button **play all songs** to stream songs/list songs.
- 3. By default, the song is played after tapping.
- 4. The user can playback a song/ a list song by tapping the button playback on the screen.

Alternative Flow

Step	Description	
1a	1a.1. On the homepage screen, select Your Library , open List Playlist . 1a.2. Users tap to open any existing Playlist and the list song shows up.	
1b	1b.1 Open the search bar and search for a specific song/playlist by tapping song/playlist name.	

Pre-condition

- The account is logged in.
- There is a song/list of songs streaming.

Post-condition

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- The song/list of songs do not stop when reaching the end of the song/list but play all of each again and again.

2.17 Random Song in list of song (Shuffle) Use Case

Use Case ID	U016
Use Case Name	Random song play in the list of songs (Shuffle).
Summary Description	Allow users to play random song in the list song streaming.
Actor(s)	Admin, Artist, Non-artist.

Basic Flow

- 1. On the homepage screen, select Your Library, open List song.
- 2. Tap button **plays all songs** to stream list songs.
- 3. By default, the list of songs is played after tapping.
- 4. The user can play random song in the list by tapping the button random song on the screen.

Alternative Flow

Step	Description	
1a	1a.1. On the homepage screen, select Your Library , open List Playlist . 1a.2. Users tap to open any existing Playlist to open.	
1b	1b.1 Open the search bar and search for a specific playlist by name.	

Pre-condition

- The account is logged in.
- There is a list of songs streaming.

Post-condition

- The songs in the list play randomly.
- If there is only a song playing, there is nothing happening by the action tap random song button.

2.18 Remove song from playlist Use Case

Use Case ID	U018	
Use Case Name	Remove song from playlist	
Summary Description	Allow users to remove a specific song from a specific playlist.	
Actor(s)	Admin, Artist, Non-artist.	
Basic Flow		
1. On the homepage screen, select Your Library , open List Playlist .		

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- 2. Tap the **Playlist** name to open.
- 3. The list of songs in the playlist show up.
- 4. The user hits the option Add to playlist
- 5. User tap the three-dot beside the title of song user want to remove from playlist
- 6. In the pop up window, users can find the option **Remove from playlist.**
- 7. Tap that option to remove song from playlist

Alternative Flow

Step Description

Pre-condition

- The account is logged in.
- The playlist is owned by Users.
- The song needed to be removed from the playlist has to exist in the playlist before.

Post-condition

- The specific song is removed from the specific playlist.
- Users add the song to the playlist at any time.