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**Group01**

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**Music Player  
Use Case Specification**

**Version 1.0**

Music Player	Version: 1.0
Use Case Specification	Date: 23/06/2022

## Revision History

Date	Version	Description	Author
23/06/2022	1.0	Initial version	Trần Thiện Tiến Phạm Ngọc Anh Thư

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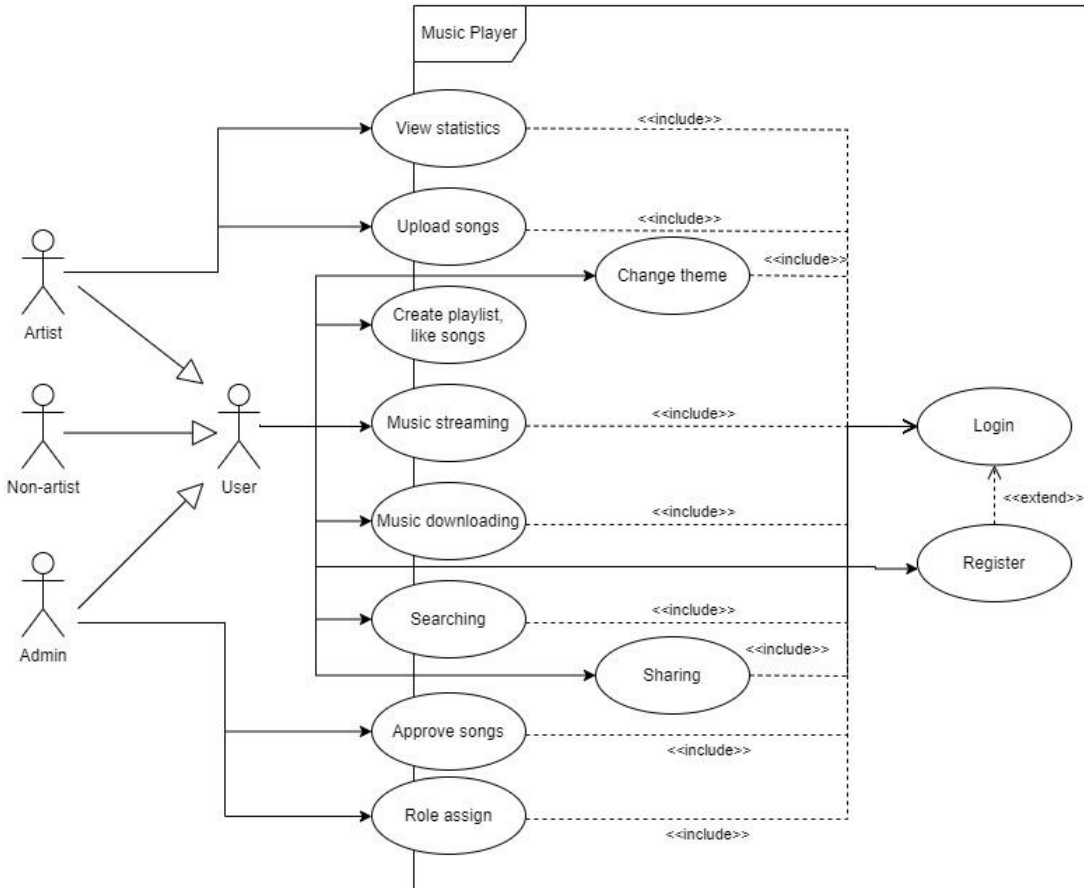
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## Use Case Specification (Small Project)

### 1. Use Case Model:



### 2. Use Case Specification

#### 2.1 Login Use Case:

<b>Use Case ID</b>	U001
<b>Use Case Name</b>	Login
<b>Summary Description</b>	Allow users to login into the system
<b>Actor(s)</b>	Artist, Non-artist, Admin
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. User opens Music App on mobile phone</li> <li>2. The application shows login form</li> <li>3. The actor enters their username and password</li> <li>4. The actor presses a login button to send information (username/password) in the form to system</li> <li>5. The system validates the entered username and password</li> </ol>	

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6. The system notifies the actor to sign in successfully, switching the screen to the main menu then.	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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.
<b>Pre-condition</b>	
- None	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- The user is successfully logged in and the system displays a homepage based on actor type</li> <li>- The system can't validate the username/password and displays the corresponding error.</li> </ul>	

## 2.2 Registration Use Case:

<b>Use Case ID</b>	U002
<b>Use Case Name</b>	Registration
<b>Summary Description</b>	Allow users to create an account on the system
<b>Actor(s)</b>	Artist, Non-artist, Admin
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. On the <b>Sign In</b> screen, the user selects <b>Sign Up</b></li> <li>2. The user types username and password</li> <li>3. The user chooses <b>Submit</b> button</li> <li>4. The system validates the entered User Account information</li> <li>5. The system sends information to the database to be added, using MySQL query to insert Account table.</li> <li>6. The system obtains the status of active from database</li> <li>7. The system informs user that account has been created</li> <li>8. Application automatically log in with registered information and switch to the home screen</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
	At any time, the User can choose the left arrow icon on the left corner of the screen to return to the <b>Log In</b> 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,

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	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 <b>log in</b> screen with autofill username 5a.3.b.1. User re-enters information
<b>Pre-condition</b>	
- None	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- The user's details are stored in the database.</li> <li>- The user entered successful information and is returned to the home page as a Logged In User</li> <li>- The User entered invalid data or choose to cancel the account creation request. In either case, no account will be created</li> </ul>	

### 2.3 Music downloading Use Case

<b>Use Case ID</b>	U003
<b>Use Case Name</b>	Music downloading
<b>Summary Description</b>	Allow users to download a song on the system
<b>Actor(s)</b>	Artist, Non-artist, Admin
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. On the Homepage screen, the User selects Search icon</li> <li>2. User types title, artist, album, or genre for searching song</li> <li>3. The system searches for the song in the database.</li> <li>4. The screen displays suggested songs for the user</li> <li>5. The user chooses a song.</li> <li>6. The application shows the list of works to do with that song.</li> <li>7. The user presses the download button.</li> <li>8. The user tracks the progress bar to know when the song is finished downloading.</li> <li>9. The song is downloaded to user's devices.</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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

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Pre-condition
<ul style="list-style-type: none"> <li>- Users must be logged in..</li> <li>- The storage on the device has enough space to store songs.</li> </ul>
Post-condition
<ul style="list-style-type: none"> <li>- Song is downloaded to user devices.</li> <li>- The system detects errors and displays the corresponding error.</li> </ul>

## 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	
<ol style="list-style-type: none"> <li>1. On the homepage screen, the user opens the search box and fills in the song/artist/album.</li> <li>2. User presses the magnifying glass icon.</li> <li>3. The system searches for song/artist/album in database.</li> <li>4. Searching successfully and user receive song's/user's information on screen.</li> </ol>	
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	
<ul style="list-style-type: none"> <li>- Users must be logged in.</li> </ul>	
Post-condition	
<ul style="list-style-type: none"> <li>- The information shows on screen clearly, and is easy to understand.</li> <li>- The system can't find out the user/ song's information: alert and displays the corresponding error.</li> </ul>	

## 2.5 Sharing Use Case

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<b>Use Case ID</b>	U005
<b>Use Case Name</b>	Sharing
<b>Summary Description</b>	Allow users to share songs to social network.
<b>Actor(s)</b>	Artist, Non-artist, Admin
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. The user chooses a song</li> <li>2. The user chooses three-dot icon at the right bottom in Music Listening screen.</li> <li>3. The application shows the list of works to do with that song.</li> <li>4. The user presses the <b>sharing</b> button.</li> <li>5. The user chooses one type of social network to share.</li> <li>6. The application switches to the corresponding social network authorization screen</li> <li>7. Authorization accepted by user</li> <li>8. The song is shared on user's social media.</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- Users must be logged in.</li> <li>- Users search for music based on <b>Searching use case</b></li> <li>- Users select music in a created playlist</li> </ul>	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- The user is successfully sharing songs on social media.</li> <li>- The system can't share songs and displays the corresponding error.</li> </ul>	

## 2.6 Approve Use Case

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



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Basic Flow	
<ol style="list-style-type: none"> <li>1. The Artist sends an uploaded song request.</li> <li>2. The admin receives notification.</li> <li>3. The admin checks the content of the artist submitted is complete</li> <li>4. The admin sends information to the censorship department.</li> <li>5. The censorship department allows song release, and feedback to the admin.</li> <li>6. The admin recognizes the information and notifies to artist</li> </ol>	
Alternative Flow	
Step	Description
4a	<ol style="list-style-type: none"> <li>4a.1. The admin recognizes the artist's information submitted incomplete or incorrect</li> <li>4a.2. The admin responds to the artist to check again</li> <li>4a.3. End use case</li> </ol>
5a	<ol style="list-style-type: none"> <li>5a.1. Song does not pass censorship, the censorship department feedback to admins is not granted upload permissions</li> <li>5a.2. The admin recognizes the information and notifies to artist</li> </ol>
Pre-condition	
<ul style="list-style-type: none"> <li>- Admin must be logged in.</li> <li>- There is a request sent to Admin.</li> </ul>	
Post-condition	
<ul style="list-style-type: none"> <li>- <b>Admin allows:</b> the request will be executed (song will be uploaded to system).</li> <li>- <b>Admin denies:</b> the request will be ignored. The song is not uploaded or restricted to certain countries or ages</li> </ul>	

## 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	
<ol style="list-style-type: none"> <li>1. The user sends an artist role request.</li> <li>2. Admin receives the notification</li> <li>3. The admin checks out the user's previously made products.</li> <li>4. The admin assigns artist role to user</li> <li>5. The admin notifies user and let him/she know that he/she can use artist features.</li> </ol>	
Alternative Flow	

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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,...
4b	4b.1. The admin does not assign the artist role because it does not meet standards 4b.2. The admin notifies user
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- Admin must be logged in..</li> <li>- There are users in the system.</li> </ul>	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- The admin approved artist role for user.</li> <li>- The admin doesn't approve artist role because the user does not meet standards</li> </ul>	

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## 2.8 View Statistic Use Case

<b>Use Case ID</b>	U008
<b>Use Case Name</b>	View Statistic
<b>Summary Description</b>	Allow artists to track how well their music is resonating with listeners, and measure the impact of their marketing efforts.
<b>Actor(s)</b>	Artist
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. Click on the name in the top right corner of the application</li> <li>2. Choose <b>Profile</b></li> <li>3. System direct your screen to <b>Profile</b> Screen</li> <li>4. Choose <b>Audience</b></li> <li>5. The <b>Audience</b> section displays a timeline of your total numbers of listeners, streams, and followers</li> </ol>	
<b>Alternative Flow</b>	
Step	Description
4a	4a.1. Artist chooses <b>Source of Streams</b> 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)
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- Music App needs to be installed before.</li> <li>- User is logged in</li> <li>- User opens homepage</li> </ul>	

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<ul style="list-style-type: none"> <li>- The artist role was approved by Admin</li> <li>- User needs to upload at least 1 song to view statistics</li> </ul>
<b>Post-condition</b>
<ul style="list-style-type: none"> <li>- The user understands a number of listens from all ages and countries</li> <li>- The user couldn't see the statistics because no songs had been published.</li> </ul>

## 2.9 Upload Music Use Case

<b>Use Case ID</b>	U009
<b>Use Case Name</b>	Upload Music
<b>Summary Description</b>	Allow uploads songs to Music App
<b>Actor(s)</b>	Artist
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. The Application prompts the artist for song location, song title, and relevant information.</li> <li>2. Artist enters song location, song title, and relevant information.</li> <li>3. Artist indicates that he/she has finished entering song information</li> <li>4. Artist chooses Submit button</li> <li>5. Admin verifies song location provided by Artist and song size.</li> <li>6. Admin sends song information to the database to be added, using MySQL query to insert Songs table.</li> <li>7. Admin obtains the status of add from database</li> <li>8. Admin informs Artist of upload status</li> <li>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.</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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

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	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
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- Music App needs to be installed before.</li> <li>- User is logged in</li> <li>- The artist role was approved by Admin</li> <li>- User chooses <b>Upload</b> section on the homepage.</li> </ul>	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- The song will be displayed in the application's main song library to all users.</li> <li>- The song will not be displayed or restricted because of violating community standards.</li> </ul>	

## 2.10 Change theme Use Case

<b>Use Case ID</b>	U010
<b>Use Case Name</b>	Change theme
<b>Summary Description</b>	Allow user to change the theme color of the toolbar
<b>Actor(s)</b>	Admin, Artist, Non-artist.
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. On the homepage screen, the user chooses the name/avatar in the top right corner of the application</li> <li>2. The user chooses <b>Setting</b>.</li> <li>3. User scrolls down the <b>Setting</b> screen and chooses <b>Theme</b></li> <li>4. A <b>Theme setting</b> dialog box pops up.</li> <li>5. User chooses one of eight colors for users provided by the application.</li> <li>6. The selected color is updated to the background of the toolbar.</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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.
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- The user is logged in.</li> <li>- The user makes sure to update the app to the latest version to get full of theme colors</li> </ul>	
<b>Post-condition</b>	

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- 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

<b>Use Case ID</b>	U011
<b>Use Case Name</b>	Create playlist/favorite songs
<b>Summary Description</b>	Allow users to create their own favorite song list or lists by genre of music
<b>Actor(s)</b>	Admin, Artist, Non-artist.
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. On the homepage screen, select <b>Your Library</b>.</li> <li>2. Tap <b>Create Playlist</b></li> <li>3. In the pop-up window, the user types in a name for playlist</li> <li>4. The user hits <b>Create</b></li> <li>5. In the next window, the user tap button <b>Add Songs</b></li> <li>6. The user can search songs by title, artist, or genre</li> <li>7. The user chooses the plus sign to the right of the title.</li> <li>8. The song was added to the playlist</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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 <b>Add to playlist</b> 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 <b>Search icon</b> 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 <b>Add to Playlist</b> 5a.5. The user selects name of the playlist which the user wants to add
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- The account is logged in.</li> </ul>	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- User creates a list of songs with his/her favorite songs</li> <li>- Users cancels or deletes the created playlist at any time</li> </ul>	

## 2.12 Music Streaming Use Case

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<b>Use Case ID</b>	U012
<b>Use Case Name</b>	Music Streaming
<b>Summary Description</b>	Allow users to enjoy the music
<b>Actor(s)</b>	Admin, Artist, Non-artist.
<b>Basic Flow</b>	
<ol style="list-style-type: none"> <li>1. On the Homepage screen, the User selects <b>Search</b> icon</li> <li>2. User types title, artist, album, or genre for searching song</li> <li>3. The system searches songs on the database based on the words the user types</li> <li>4. The screen displays suggested songs for the user</li> <li>5. User chooses a song</li> <li>6. Music streaming screen appears and automatically plays music</li> </ol>	
<b>Alternative Flow</b>	
<b>Step</b>	<b>Description</b>
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 <b>Your Library</b> 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 <b>Basic Flow</b>
<b>Pre-condition</b>	
<ul style="list-style-type: none"> <li>- The account is logged in.</li> <li>- Account is not banned by admin.</li> <li>- Songs the user is looking for are not banned in their country.</li> </ul>	
<b>Post-condition</b>	
<ul style="list-style-type: none"> <li>- 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)</li> <li>- Users don't stream music because they can't find their favorite song.</li> <li>- The user's speaker device is damaged, so it is impossible to stream music</li> </ul>	