**SOFTWARE ENGINEERING PROBLEM SPECIFICATION TABLE, IDENTIFYING THE FOLLOWING ITEMS**

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| CUSTOMER | NeoTunes |
| USER | Users |
| FUNCTIONAL REQUIREMENTS | R1: The system can register users and producers; artist or content creator  R2: The system can register User the kind consumers and can be standard and premium  R3: The system can register songs  A4: The System can register podcasts  R5:The system can create list of reproduction.  A6: System must be able to create a code randomly of 16 integers that must be positioned in a 6x6 matrix where they are positioned in different ways based on type:   * Only Cancion: N * Podcast only: T * Song and Podcast: the number of the cells i,j, running through the matrix from bottom to top and from right to left, when the sum i+j is an odd number greater than 1.   A7: The System must be able to edit a playlist.  A8: The System must be able to Share a playlist.  A9: The System must be able to simulate the playback of a song or podcast (standard and premium).  A10: The System must be able to purchase a song.  R11: Generate reports with the recorded data:   * 1. For each type of audio, songs, and podcast, report the cumulative total of streams across the platform.   2. Report the most listened to song genre (name and number of plays) for a specific user and for the entire platform and itsmaximum number of plays.   3. Report the most-listened podcast category (name and number of views) for a specific user and for the entire platform.   4. For each of the members of the Top 5 artists and the Top 5 content creators on the platform, report the name and number of total views.   5. For each of the members of the Top 10 songs and the Top 10 podcasts, report the name, genre or category and total number of views.   6. For each genre, report the numberof songs sold and the total sales value ($).   7. From the best-selling song on the platform, report the total number of sales and the total sales value ($). |
| CONTEXT OF THE PROBLEM | It is requested to create a system to be able to compete in the music streaming market . |
| NON-FUNCTIONAL REQUIREMENTS | -Create the system for future expansion  -Created in Java |

**Functional Requirements Analysis Table (Note: One table for each functional requirement)**

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| Name or identifier | registerProducer | | |
| Summary | A1: The System must be able to register producer users; artists or content creators. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| name | String | can't be null |
| date | date | can't be null |
| imageURL | String | can't be null |
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| General activities required to achieve results | 1. Enters system 2. Chooses register producer 3. inputs data | | |
| Result or postcondition | Creates producer with data. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "successfully registered" |
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| Name or identifier | registerUser | | |
| Summary | A2: System must be able to register consumer, standard and premium users. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Nickname | String | Can't be null |
| Id | Int | Can't be null |
| Date | Date | Can't be null |
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| General activities required to achieve results | 1. Enters system 2. chooses register user 3. inputs data | | |
| Result or postcondition | Creates users with data. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "successfully registered" |
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| Name or identifier | registerSong | | |
| Summary | A3: The System must be able to record songs. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| name | String | Can't be null |
| Album | String | Can't be null |
| genre | Int | Can't be null, 1-4 to choose between Rock, Pop, Trap, or House. |
| URL | String | Can't be null |
| duration | Int | Can't be null |
| value | double | Can't be null |
| General activities required to achieve results | 1. Enters system 2. Chooses artist 3. Chooses to register song 4. inputs data | | |
| Result or postcondition | Creates song with data and auto fills the rest | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Successfully registered song" |
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| Name or identifier | registerPodcast | | |
| Summary | A4: The System must be able to register podcasts. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| name | String | can't be null |
| Description | String | can't be null |
| category | Int | can't be null, 1-4 to choose between Politics, Entertainment, VideoGames, Fashion |
| URL | String | can't be null |
| duration | Int | Can't be null |
| General activities required to achieve results | 1. Enters system 2. Chooses content creator 3. Chooses to register podcast 4. Inputs data | | |
| Result or postcondition | Creates a podcast with data. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "registered successfully" |
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| Name or identifier | create Playlist | | |
| Summary | A5: The System must be able to create a playlist. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| name | String | can't be null |
| audio | Obj | Can be multiple objects |
| code | Int | id of playlist, autogenerated |
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| General activities required to achieve results | 1. Enter system 2. Choose user 3. Create Playlist 4. input data | | |
| Result or postcondition | Creates a playlist with name, selected audio objects and randomized unique code. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Successfully registered playlist" |
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| Name or identifier | autoCode | | |
| Summary | A6: System must be able to create a code randomly of 16 integers that must be positioned in a 6x6 matrix where they are positioned in different ways based on type:   * Song only: N * Podcast only: T * Song and Podcast: the number of the cells i,j, running through the matrix from bottom to top and from right to left, when the sum i+j is an odd number greater than 1. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | 1. Enters system 2. Chooses user 3. Create Playlist | | |
| Result or postcondition | When a playlist is created it auto generates a code in the form of N, T or skipping spaces based on contents. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Created code: ###" |
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| Name or identifier | editPlaylist | | |
| Summary | A7: The System must be able to edit a playlist. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| code | Int | Select Code ID of Playlist |
| answer | Int | can't be null, 1-2 based on if you want to edit name or audio. |
| audioAnswer | Int | can't be null, 1-2 based on adding or removing audio |
| audioChoice | String | can't be null, has to be name of audio in playlist if its to remove or from registered audio if its to add. |
| nameChoice | String | can't be null, name you wish to change playlist to. |
| General activities required to achieve results | 1. Enters system 2. Chooses user 3. Chooses to edit playlist 4. Chooses to edit name or audio 5. If audio is chosen then pick between add or remove audio, if name is chosen then choose new playlist name. 6. Choose audio name or playlist name. | | |
| Result or postcondition | Edited playlist be it name, new audio or removed audio. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Playlist successfully edited: (Name/Audio)" |
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| Name or identifier | sharePlaylist | | |
| Summary | A8: The System must be able to Share a playlist. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| code | Int | Select code ID of playlist. |
| answer | Int | can't be null, 1-2 based on getting playlist code or using code. |
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| General activities required to achieve results | 1. Enter system 2. Choose user 3. Choose sharePlaylist 4. Choose to get or to use code | | |
| Result or postcondition | Adds playlist if chosen to use code or shows code of already created playlist of user to share. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "successfully registered playlist: name" or "Code of name playlist is: ###" |
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| Name or identifier | Plays | | |
| Summary | A9: The System must be able to simulate the playback of a song or podcast (standard and premium). | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| type | Int | can't be null, 1-2 based on if its song or podcast |
| name | String | has to be registered for a song or podcast. |
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| General activities required to achieve results | 1. Enter System 2. Choose User 3. Choose Play 4. input choices | | |
| Result or postcondition | Will simulate requested audio. | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Audio: name  Duration: duration" |
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| Name or identifier | buySong | | |
| Summary | A10: The system must be able to let the user buy a song. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| name | String | can't be null, has to be registered song |
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| General activities required to achieve results | 1. Enters system 2. Chooses user 3. Chooses to buy song 4. inputs name | | |
| Result or postcondition | Buys song for user | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Successfully Bought" |
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| Name or identifier | Reports | | |
| Summary | R11: Generate reports with the recorded data:   * + For each type of audio, songs, and podcast, report the cumulative total of streams across the platform.   + Inform the most listened song genre (name and number of plays) for a specific user and for the entire platform and its numberof plays.   + Report the most-listened podcast category (name and number of views) for a specific user and for the entire platform.   + For each of the members of the Top 5 artists and the Top 5 content creators on the platform, report the name and number of total views.   + For each of the members of the Top 10 songs and the Top 10 podcasts, report the name, genre or category and total number of views.   + For each genre, report the number of songs sold and the total sales value ($).   + From the best-selling song on the platform, report the total number of sales and the total sales value ($). | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| answer | Int | can't be null, 1...\* chooses num based on info you want to ask for. |
| name | String | can't be null, name of user. Only if you choose an option that requires a specific user. |
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| General activities required to achieve results | 1. Enters system 2. Chooses reports 3. Chooses info | | |
| Result or postcondition | Shows a report of requested info | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| .msg | String | "Song: name  Reproductions: reproductions"  Shows this info for all songs. |
| .msg | String | "Most listened song: name  Reproductions: reproductions"  For the most listened song of user and of whole platform |
| .msg | String | "Most listened song: name  Reproductions: reproductions"  For the most listened song of a specific user. |
| .msg | String | "Name: name  Total Reproductions: reproductions"  Shows info for top 5 artists and creators. |
| .msg | String | "Name: name  Genre or Category: ##  Total Reproductions: reproductions"  Show for top 10 songs and podcasts. |
| .msg | String | "Number of songs sold in ??? Genre: ##  Total Sales: ##"  Show for all genres. |
| .msg | String | "Total number of sales: ##  Total net Sales:: ##"  Show for most sold song. |