**iTABLA DE ESPECIFICACIÓN DEL PROBLEMA**

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| **Client** | NeoTunes |
| **User** | Consumers users, producers users |
| **Functional Requirements** | **R1:** Register producer users: Artist and Content creators.  **R2:** Register consumer users: Standard and Premium.  **R3:** Register songs and podcasts.  **R4:** Create a playlist.  **R5:** Edit a playlist.  **R6:** Share a playlist.  **R7:** Simulate playback of a song or podcast.  **R8:** Buy a song.  **R9:** Report the total accumulated plays of songs or podcasts on the platform.  **R10:** Report the name and number of plays of the most listened song genre for a specific user and for the entire platform.  **R11:** Report the name and number of plays of the most listened podcast category for a specific user and for the entire platform.  **R12:** Report the name and number of reproductions of each member of the top 5 artists and top 5 content creators.  **R13:** Report the name, genre or category and the number of plays of each member of the top 10 songs and top 10 podcasts.  **R14:** Report the number of songs sold and total sales value, for each genre.  **R15:** Report the total number of sales and the total sales value of the best-selling song on the platform. |
| **Problem Context** | A prototype of a software that allows streaming audio content is required. For this, the software must satisfy several functionalities, among which are user registration, audio registration and audio playback. |
| **Non-functional Requirements** |  |

**Tabla de análisis de requerimientos funcionales (Nota: Una tabla por cada requerimiento funcional)**

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| Nombre o identificador | R1 | | |
| Resumen | Registrar usuarios productores | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| name | String | Can’t repeat with other producer users |
| url | String |  |
| producerType | int | Must be a valid int, 1 or 2 |
| Actividades generales necesarias para obtener los resultados | 1. Preguntarle al usuario la información 2. Comprobar que las condiciones se cumplan | | |
| Resultado o postcondición | Añadir el usuario productor al ArrayList de usuarios productores | | |

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| Nombre o identificador | R2 | | |
| Resumen | Registrar usuario consumidor estándar | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nickName | String | Can’t repeat with other consumer users |
| id | String |  |
| Actividades generales necesarias para obtener los resultados | 1. Preguntarle al usuario la información 2. Comprobar que la condición se cumpla | | |
| Resultado o postcondición | Se añade el usuario consumidor (estándar) a la lista de usuarios consumidores | | |

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| Nombre o identificador | R3 | | |
| Resumen | Registrar canciones y podcast | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| audioType | int | Must be a valid int, 1 or 2 |
| name | String | Can’t repeat with other audio |
| album | String | audioType is 1 |
| genre | int | audioType is 1  Must be a valid int, 1, 2, 3 or 4 |
| url | String |  |
|  | duration | String |  |
|  | cost | double | audioType is 1 |
|  | description | String | audioType is 2 |
|  | category | int | audioType is 2  Must be a valid int, 1, 2, 3 or 4 |
| Actividades generales necesarias para obtener los resultados | 1. Preguntarle al usuario el audio type 2. Dependiendo de que tipo de audio preguntar la siguiente información 3. Comprobar que se cumplan las condiciones | | |
| Resultado o postcondición | Se añade el audio a la lista de audios | | |

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| Nombre o identificador | R4 | | |
| Resumen | Crear una lista de reproduccion | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nickName | String | Must be a valid nickname |
| playlistName | String |  |
| playlistType | int | Must be a valid int, 1, 2 or 3 |
| Actividades generales necesarias para obtener los resultados | 1. Preguntarle al usuario la información 2. Comprobar que se cumplan las condiciones 3. Si el usuario es estándar también se comprobara si no supera el límite de playlists 4. Se crea un código único a la playlist | | |
| Resultado o postcondición | Se añade la playlist al usuario correspondiente y se muestra el codigo | | |

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| Nombre o identificador | R5 | | |
| Resumen | Editar una lista de reproduccion | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| choice | int | Must be a valid int 1 or 2 |
| nickName | String | Must be a valid nickname |
| playlistCode | String | Must be a valid code |
| audioName | String | Must be a valid audio |
| Actividades generales necesarias para obtener los resultados | 1. Se pregunta al usuario la información 2. Se comprueban las condiciones | | |
| Resultado o postcondición | 1. Si choice es 1, se añade la canción a la playlist 2. Si choice es 2, se remueve la canción de la playlsit | | |

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| Nombre o identificador | R6 | | |
| Resumen | Compartir una playlist(Crear una playlist con una playlist de otro usuario) | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nicknameOwner | String | Must be a valid nickname |
| nickname | String | Must be a valid nickname |
| playlistCode | String | Must be a valid code |
| Actividades generales necesarias para obtener los resultados | 1. Se pregunta al usuario la información 2. Se comprueban las condiciones 3. Se crea una copia de la playlist del otro usuario dueño de esta 4. Si el usuario es estándar comprobar que no supere el limite de playlist | | |
| Resultado o postcondición | Se le añade la playlist al usuario | | |

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| Nombre o identificador | R7 | | |
| Resumen | Simular la reproducción de una cancion | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nickName | String | Must be a valid nickname |
| audioName | String | Must be a valid audio |
| Actividades generales necesarias para obtener los resultados | 1. Se le piden los datos al usuario 2. Se comprueban las condiciones de selección 3. Si el usuario es estándar se comprueba si se le debe poner un anuncio o no | | |
| Resultado o postcondición | 1. Se añade una reproducción a el audio en el arraylist 2. Se añade una reproducción al creador de ese audio en el arraylist 3. Dependiendo del tipo de audio, se añade una reproducción al usuario de su tipo de genero o categoría 4. Se muestra el mensaje simulando la reproducción de la canción, probablemente con un anuncio | | |

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| Nombre o identificador | R8 | | |
| Resumen | Comprar una cancion | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nickName | String | Must be a valid nickname |
| audioName | String | Must be a valid audio |
| Actividades generales necesarias para obtener los resultados | 1. Se pregunta al usuario la información 2. Se comprueban las condiciones 3. Se comprueba que el audio sea una canción y no un podcast 4. Si el usuario es estándar se comprueba que no supere su limite de comprar canciones 5. Se le añade una venta a la canción en el arraylist de audios 6. Se le añade una venta y su valor a el creador de la canción en el arraylist de productores | | |
| Resultado o postcondición | 1. Se compra la cancion | | |

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| **Name or identifier** | **R9:**  Report the total accumulated plays of songs or podcasts on the platform. | | |
| **Abstract** | The system must allow to obtain the total accumulated plays of songs or podcasts within the platform. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
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| **General activities necessary to obtain the results** | * The program enters the audio array and obtains the number of reproductions of all the audios. | | |
| **Result or postcondition** | The program returns a message with the number of plays of the audios. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |

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| **Name or identifier** | **R10:**  Report the name and number of plays of the most listened song genre for a specific user and for the entire platform. | | |
| **Abstract** | The system must allow knowing the name and number of reproductions of a genre, either only of a user or of the entire platform. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
| Nickname | String |  |
| **General activities necessary to obtain the results** | * The program enters the given user and obtains the genre he/she listens to the most. In the case of the whole platform, it enters the audio array and obtains the most listened genre. | | |
| **Result or postcondition** | The program returns a message with the name of the most listened genre and the number of reproductions. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |

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| **Name or identifier** | **R11:**  Report the name and number of plays of the most listened podcast category for a specific user and for the entire platform. | | |
| **Abstract** | The system must allow knowing the name and number of reproductions of a category, either only of a user or of the entire platform. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
| Nickname | String |  |
| **General activities necessary to obtain the results** | * The program enters the given user and obtains the category he/she listens to the most. In the case of the whole platform, it enters the audio array and obtains the most listened category. | | |
| **Result or postcondition** | The program returns a message with the name of the most listened category and the number of reproductions. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |

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| **Name or identifier** | **R12:**  Report the name and number of reproductions of each member of the top 5 artists and top 5 content creators. | | |
| **Abstract** | The system should make it possible to obtain the name and the number of reproductions of each of the members of the top 5 artists and the top 5 content creators. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
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| **General activities necessary to obtain the results** | * The program enters the array of producing users, and compares the reproductions. * It organizes the producing users in the top 5 and displays the name and the number of reproductions. | | |
| **Result or postcondition** | The program returns a message with the top 5 best artists and content creators, along with their names and number of reproductions. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |

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| **Name or identifier** | **R13:**  Report the name, genre or category and the number of plays of each member of the top 10 songs and top 10 podcasts. | | |
| **Abstract** | The program should allow to obtain the number of plays, the name and the category or genre of the top 10 songs and podcasts. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
|  |  |  |
| **General activities necessary to obtain the results** | * The program enters the audio array, first the songs and then the podcasts, and then compares the number of plays of each. * It makes the top 10 and obtains the name, genre or category and the number of productions. | | |
| **Result or postcondition** | The program returns a message with the top songs and podcasts, together with their names, category and genre and the number of plays. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |

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| **Name or identifier** | **R14:**  Report the number of songs sold and total sales value, for each genre. | | |
| **Abstract** | The program must be able to show, for each genre, the number of songs sold and the total sales value. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
|  |  |  |
| **General activities necessary to obtain the results** | * The program enters the array of audios (songs) and begins to obtain the number of sales of each genre, as well as the total sales value. | | |
| **Result or postcondition** | The program returns a message with the number of sales of each genre as well as the total sales value. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |

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| **Name or identifier** | **R15:**  Report the total number of sales and the total sales value of the best-selling song on the platform. | | |
| **Abstract** | The program should allow to obtain the number of sales and the total sales value of the best-selling song on the platform. | | |
| **Inputs** | **Input name** | **Datatype** | **Selection or repetition condition** |
|  |  |  |
| **General activities necessary to obtain the results** | * The program enters the array of audios (songs) and, by means of sales comparisons, obtains the best seller. Then, it obtains the number of sales and the total sales value of that song. | | |
| **Result or postcondition** | The program returns a message with the number of sales and the total sales value of the most listened song on the platform. | | |
| **Outputs** | **Output name** | **Datatype** | **Selection or repetition condition** |
| Message | String |  |