

Software Engineering I – Final Project

TABLA DE ESPECIFICACIÓN DEL PROBLEMA DE INGENIERÍA DE SOFTWARE

CLIENT	Danish company NeoTunes
USER	Platform Consumers
FUNCTIONAL REQUIREMENTS	<p>R1. Register users producers, artists and content creators: The system must allow registering users of type artist or creators of content, with their due information.</p> <p>R2. Register consumer, Standard and Premium users: The system must allow registering users of Standard or Premium type, with their due information.</p> <p>R3. Register songs: The system allows you to register songs in the program, with their information.</p> <p>R4. Register podcast: The system allows you to register podcasts in the program, with their proper information.</p> <p>R5. Create a playlist: The system allows a consumer user, whether Standard or Premium, to create a playlist.</p> <p>R6. Edit a playlist: The system allows users to edit their playlists, and add or remove songs or podcasts.</p> <p>R7. Share a playlist: The system allows the user to share their playlists with a randomly generated unique number code.</p> <p>R8. Simulate the playback of a song or podcast (Standard and Premium): The</p>

system simulates the playback of a song or a podcast, if the user is Standard it will also simulate the announcement.

R9. Buy a song: The user can buy the songs they want, if they are a Standard user they can buy up to 100 songs while if they are Premium they can buy unlimited songs.

R10. Report on the accumulated total of views across the platform for songs and podcasts: The system creates a report for the songs and podcasts on the cumulative total of plays they have.

R11: Inform about the most listened song genre for a specific user and for the entire platform: The system reports the most listened genre of a specific user, also the most listened genre on the platform with its specific number of plays.

R12: Report on the most listened-to podcast category for a specific user and for the entire platform: The system reports the most listened-to category of a specific user, also the most listened-to category on the platform with its specific number of views.

R13: Top 5 Artists and Top 5 Content Creators Report: The system displays a report of the top 5 artists and top 5 content creators on the platform.

R14: Report of the top 10 songs and the top 10 podcasts: The system shows a report of the top 10 songs and the top 10 podcasts, reporting the name, genre/category, and the number of reproductions of each one.

R15. Report on the songs sold and the total sales value of each genre: The

	<p>system shows the number of songs sold in each genre and the total value of sales in dollars.</p> <p>R16. Report of the best-selling song on the platform: The system shows a report of the best-selling song on the platform, with the number of sales and the value of these in dollars.</p> <p>R17. Show ad: The system places an ad on every song or podcast playback made by a Standard user.</p>
CONTEXT OF THE PROBLEM	Develops a music streaming program where you can register users, create playlists, buy songs, add songs and podcasts and get program reports.
NON-FUNCTIONAL REQUIREMENTS	The system should be easy to update with new types of users or audio.

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

Nombre o Identificador	R1. Register users producers, artists and content creators: The system must allow registering users of type artist or creators of content, with their due information.		
Resumen	The system allows you to register producer-type users, whether artists or content creators. Producer-type users have a name, a linking date, and a URL with their image that distinguishes them.		
Entradas	Entry name	Data type	Selection or repetition condition
	name	String	
	imageURL	String	
Resultado o postcondición	The artist or content creator is registered with their name, image and date of linking.		

Salidas	Entry name	Data type	Selection or repetition condition
	userProducerRegistered	String	

Nombre o Identificador	R2. Register consumer, Standard and Premium users: The system must allow registering users of Standard or Premium type, with their due information.		
Resumen	The system allows you to register consumer-type users, whether Standard or Premium. Consumer-type users have a nickname, an id, and a linking date. The user's nickname cannot be repeated.		
Entradas	Entry name	Data type	Selection or repetition condition
	nickname	String	
	Id	String	
Resultado o postcondición	The user, whether Standard or Premium, is registered with his nickname, his id (cedula) and his date of linking.		
Salidas	Entry name	Data type	Selection or repetition condition
	userConsumerRegistered	String	

Nombre o Identificador	R3. Register songs: The system allows you to register songs in the program, with their information.		
Resumen	The system allows you to register songs, these can only be registered by artists, each song has a name, an album, a musical genre, a URL of the album image, a duration, the sale value (in dollars), a number of reproductions and number of times sold, these last two start at 0.		
Entradas	Entry name	Data type	Selection or repetition condition
	artistName	String	
	songName	String	

	songDuration	Int	
	albumImageUrl	String	
	songPrice	Double	
	typeOfGenreSong	String	
Resultado o postcondición	The song is registered in the system, associated with its respective artist, with its name, duration, its album and the representative image of the album, the price of the song and the type of genre of the song.		
Salidas	Entry name	Data type	Selection or repetition condition
	songRegistered	String	

Nombre o Identificador	R4. Register podcast: The system allows you to register podcasts in the program, with their proper information.		
Resumen	The system allows you to register podcasts, these can only be registered by content creators, each podcast has a name, a description, a category, a URL of the image that represents it, a duration and a number of reproductions.		
Entradas	Entry name	Data type	Selection or repetition condition
	creatorName	String	
	podcastName	String	
	Duration podcast	Int	
	podcastImageUrl	String	
	podcastDescription	String	
	categoryOfPodcast	String	
Resultado o postcondición	The podcast is registered in the system, associated with its respective content creator, with its name, description, category,		

	URL of the image that represents it, duration and its number of reproductions, which starts at 0.		
Salidas	Entry name	Data type	Selection or repetition condition
	podcastRegistered	String	

Nombre o Identificador	R5. Create a playlist: The system allows a consumer user, whether Standard or Premium, to create a playlist.		
Resumen	The system allows the creation of playlists for consumer users, Standard consumer users can have up to 20 playlists while Premium users can have unlimited playlists. There can be three types of playlists: song-only lists, songs and podcasts, and podcasts only. They also have an auto-generated numeric code that is their identifier to be able to share the list.		
Entradas	Entry name	Data type	Selection or repetition condition
	creatorNickname	String	
	playlistName	String	
	typeOfPlaylist	String	
Resultado o postcondición	The playlist is registered in the system to its respective creator, with its name, and its type of list. It also autogenerates the code that identifies it to be able to share it.		
Salidas	Entry name	Data type	Selection or repetition condition
	playlistCreated	String	

Nombre o Identificador	R6. Edit a playlist: The system allows users to edit their playlists, and add or remove songs or podcasts.		
Resumen	The system allows you to edit playlists for consumer users, they can add and remove songs from them.		
Entradas	Entry name	Data type	Selection or repetition condition

	playlistOwnerNickname	String	
	playlistName	String	
	addAudio	String	
	deleteAudio	String	
Resultado o postcondición	The audio (song or podcast) desired by the user from the playlist they have entered is added or removed.		
Salidas	Entry name	Data type	Selection or repetition condition
	audioDeleted	String	
	audioAdded	String	

Nombre o Identificador	R7. Share a playlist: The system allows the user to share their playlists with a randomly generated unique number code.		
Resumen	The system creates a code of 16 whole numbers, which is unique to the playlist, randomly. This code can be passed to other users in order to view their playlists.		
Entradas	Entry name	Data type	Selection or repetition condition
	creatorName	String	
	playlistName	String	
Resultado o postcondición	The system displays the playlist code so that the user can share it.		
Salidas	Entry name	Data type	Selection or repetition condition
	playlistCode	String	

Nombre o Identificador	R8. Simulate the playback of a song or podcast (Standard and Premium): The system simulates the playback of a song or a		
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	podcast, if the user is Standard it will also simulate the announcement.		
Resumen	The system simulates the playback of a song or podcast, if you are a Standard user you will also have to simulate an advertisement when playing the chosen audio.		
Entradas	Entry name	Data type	Selection or repetition condition
	userNickname	String	
	songName	String	
	podcastName	String	
Resultado o postcondición	The system simulates the playback of the audio correctly, if it is a Standard user an advertisement will be played.		
Salidas	Entry name	Data type	Selection or repetition condition
	audioPlaying	String	

Nombre o Identificador	R9. Buy a song: The user can buy the songs they want, if they are a Standard user they can buy up to 100 songs while if they are Premium they can buy unlimited songs.		
Resumen	Users can buy songs, if they are Standard users they can buy up to 100 songs while if you are a Premium user you can buy unlimited songs.		
Entradas	Entry name	Data type	Selection or repetition condition
	userNickname	String	
	songName	String	
Resultado o postcondición	There are two results, in the first the song is purchased for the user, either Premium or Standard. In the second result, the Standard user cannot buy the song since he has reached the limit of his 100 songs.		
Salidas	Entry name	Data type	Selection or repetition condition
	songBought	String	

Nombre o Identificador	R10. Report on the accumulated total of views across the platform for songs and podcasts: The system creates a report for the songs and podcasts on the cumulative total of plays they have.		
Resumen	The system generates a report on the total plays of songs and podcasts across the platform.		
Entradas	Entry name	Data type	Selection or repetition condition
Resultado o postcondición	The system shows the total views of songs and podcasts on the platform.		
Salidas	Entry name	Data type	Selection or repetition condition
	songAndPodcastReport	String	

Nombre o Identificador	R11: Inform about the most listened song genre for a specific user and for the entire platform: The system reports the most listened genre of a specific user, also the most listened genre on the platform with its specific number of plays.		
Resumen	The system generates a report on the total of reproductions of a genre for a specific user or the platform in general. For both, the name of the genre and the number of reproductions must be shown.		
Entradas	Entry name	Data type	Selection or repetition condition
	userNickname	String	
Resultado o postcondición	The system shows the most listened to genre of a user, or the most listened to genre of the platform with its number of reproductions in both cases.		
Salidas	Entry name	Data type	Selection or repetition condition

	mostListenedGenre	String	
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Nombre o Identificador	R12: Report on the most listened-to podcast category for a specific user and for the entire platform: The system reports the most listened-to category of a specific user, also the most listened-to category on the platform with its specific number of views.		
Resumen	The system generates a report on the total views of a category for a specific user or the platform in general. For both, the name of the category and the number of reproductions must be displayed.		
Entradas	Entry name	Data type	Selection or repetition condition
	userNickname	String	
Resultado o postcondición	The system shows the most listened-to category of a user or the most listened-to category of the platform with its number of reproductions in both cases.		
Salidas	Entry name	Data type	Selection or repetition condition
	mostListenedGenre	String	

Nombre o Identificador	R13: Top 5 Artists and Top 5 Content Creators Report: The system displays a report of the top 5 artists and top 5 content creators on the platform.		
Resumen	The system generates a report on the top 5 artists and the top 5 creators, each with their respective number of total reproductions.		
Entradas	Entry name	Data type	Selection or repetition condition
Resultado o postcondición	The system shows the top 5 artists and the top 5 creators with their respective number of reproductions.		
Salidas	Entry name	Data type	Selection or repetition condition

Isabella Ocampo Soto A00382369
Valentina Gonzalez A00394152

	top5Artist	String	
	top5Creators	String	

Nombre o Identificador	R14: Report of the top 10 songs and the top 10 podcasts: The system shows a report of the top 10 songs and the top 10 podcasts, reporting the name, genre/category, and the number of reproductions of each one.		
Resumen	The system generates a report on the top 10 songs and the top 10 podcasts, each with its respective name, genre/category and number of total views.		
Entradas	Entry name	Data type	Selection or repetition condition
Resultado o postcondición	The system shows the top 10 songs and the top 10 podcasts with their respective information.		
Salidas	Entry name	Data type	Selection or repetition condition
	top10Songs	String	
	top10Podcasts	String	

Nombre o Identificador	R15. Report on the songs sold and the total sales value of each genre: The system shows the number of songs sold in each genre and the total value of sales in dollars.		
Resumen	The system displays a report with the number of songs sold and the total value of sales in dollars, for each musical genre.		
Entradas	Entry name	Data type	Selection or repetition condition

Resultado o postcondición	The system shows the total songs sold by genre with their total sales value.		
Salidas	Entry name	Data type	Selection or repetition condition
	songsSoldPerGenre	String	

Nombre o Identificador	R16. Report of the best-selling song on the platform: The system shows a report of the best-selling song on the platform, with the number of sales and the value of these in dollars.		
Resumen	The system shows a report with the most played song on the platform, with its total number of sales and the total value of this.		
Entradas	Entry name	Data type	Selection or repetition condition
Resultado o postcondición	The system displays the report of the best-selling song on the platform.		
Salidas	Entry name	Data type	Selection or repetition condition
	mostSoldSong	String	

Nombre o Identificador	R17. Show ad: The system places an ad on every song or podcast playback made by a Standard user.		
Resumen	The system plays an ad on every playback of a song or podcast made by a Standard user. There are three different ads: "Nike - Just Do It," "Coca-Cola - Open Happiness" and "M&Ms - Melts in Your Mouth, Not in Your Hands."		
Entradas	Entry name	Data type	Selection or repetition condition

Isabella Ocampo Soto A00382369
Valentina Gonzalez A00394152

Resultado o postcondición	The system plays the ads on the reproductions of songs or podcasts of Standard users.		
Salidas	Entry name	Data type	Selection or repetition condition
	playAd	String	

