SOFTWARE ENGINEERING PROBLEM SPECIFICATION TABLE

NeoTunes - Integrative Task 3

CLIENT	NeoTunes
USER	Audio consumers and productors, NeoTunes Administrators.
FUNCTIONAL REQUIREMENTS	**Registration** RF001. Register producer RF002. Register consumer RF003. Register audio RF3.1. Register Song RF3.2. Register Podcast RF004. Register playlist **Interaction with playlists and audios** RF005. Edit playlist RF5.1. Rename playlist RF5.2. Add or remove song RF006. Share playlist RF007. Play audio RF008. Buy song **Showing information** RF009. Generate reports RF9.1. Total of plays per type RF9.2. Most played song genre per user and platform RF9.3. Most played podcast category per user and platform RF9.4. Producers' top 5 information per type RF9.5. Audio's top 10 information per type RF9.6. Song total sales per genre RF9.7. Best seller song's total sales
CONTEXT OF THE PROBLEM	NeoTunes is a company that wants to get into the audio market with an application that consists of user subscriptions and songs sells through the platform. In NeoTunes, users can be the owner of their songs.
NON-FUNCTIONAL	- The playlist identifiers must be generated automatically by a matrix algorithm, formed by 16 digits.

REQUIREMENTS	- The platform must be adaptable to new types of users of each type. - The platform must be adaptable to add multiple types of audios - The advertisement must include the brands given by the company: Nike, Coca-Cola, and M&Ms.

Functional requirements analysis

Name or identifier	RF001 – Register Producer		
Summary	It allows the user to create a new producer, either artist or content creator, and add it to the platform.		
Input	Input name	Data type	Selection or repetition condition
	producerType	int	
	name	String	
	pictureUrl	String	
General activities necessary to obtain the results	- Get the information from user input - If producer type is 1 create a new producer of type Artist, else create a consumer of type Content Creator. - Add the new Producer to the platform producer list.		
Result or post condition	- A new producer is registered in the producer list.		
Output	String	status	It will be successful if user entered valid data.

Name or identifier	RF002 – Register Consumer		
Summary	It allows the user to create a new consumer, either Standard or Premium, and add it to the platform.		
Input	Input name	Data type	Selection or repetition condition
	consumerType	int	
	nickname	String	

	documentId	String	
General activities necessary to obtain the results	- Get the information from user input - If producer type is 1 create a new consumer of type Standard, else create a consumer of type Premium. - Add the new consumer to the platform consumer list.		
Result or post condition	- A new consumer is registered in the producer list.		
Output	String	status	It will be successful if user entered valid data.

Name or identifier	RF3.1 – Register Song		
Summary	It allows the user to create a new song and add it to an existing artist's song list.		
Input	Input name	Data type	Selection or repetition condition
	songName	String	
	pictureUrl	String	
	duration	String	
	genre	int	
	album	String	
	saleValue	double	
	artistName	String	
General activities necessary to obtain the results	- Get the information from user input - Create a new Song with the given input - Search the artist that the song is going to be added to - Add the new song to the searched artist		
Result or post condition	- The song list of the specified producer will be modified with the new song added to it.		
Output	String	status	It will be successful if user entered valid data and the content creator is found.

Name or identifier	RF3.2 – Register Podcast		
Summary	It allows the user to create a new podcast and add it to an existing artist’s podcast list.		
Input	Input name	Data type	Selection or repetition condition
	podcastName	String	
	pictureUrl	String	
	duration	String	
	category	int	
	description	String	
	contentCreatorName	String	
General activities necessary to obtain the results	- Get the information from user input - Create a new Podcast with the given input - Search the artist that the podcast is going to be added to - Add the new podcast to the searched artist		
Result or post condition	- The podcast list of the specified producer will be modified with the new podcast added to it.		
Output	String	status	It will be successful if user entered valid data and the content creator is found.

Name or identifier	RF004 – Register Playlist		
Summary	It allows the user to create a new playlist and add it to an existing consumer’s song list, also to the general platform.		
Input	Input name	Data type	Selection or repetition condition
	consumerName	String	
	playlstName	String	
General activities necessary to obtain the results	- Get the information from user input - Create a new playlist with the given information, generate a random id, based on a matrix 6x6. - Search the specified consumer		

	- If the consumer is found, add the new playlist to the consumer, add the new playlist to the platform		
Result or post condition	- The playlist list of the specified consumer will be modified with the new song added to it. - The platform playlist list will be modified with a new playlist added to it.		
Output	String	status	It will be successful if user entered valid data and the consumer is found.

Name or identifier	RF5.1 –Rename Playlist		
Summary	It allows the user to change the name of an existing playlist.		
Input	Input name	Data type	Selection or repetition condition
	consumerName	String	
	playlistId	String	
	newName	String	
General activities necessary to obtain the results	- Get the information from user input - Search the consumer and playlist, if they do not exist yet, return an error status. - Change the name of the selected playlist to the new given by the user.		
Result or post condition	- The name of the selected playlist will be modified and set to the new one.		
Output	String	status	It will be successful if user entered valid data and both consumer and playlist are found.

Name or identifier	RF5.2 –Add or remove song
Summary	It allows the user to add or remove an existing song from the selected playlist.

Input	Input name	Data type	Selection or repetition condition
	consumerName	String	
	playlistId	String	
	songName	String	
General activities necessary to obtain the results	- Get the information from user input - Search the consumer and playlist, if they do not exist yet, return an error status. - Search in the song list the song that matches the name given by the user, if it is not found, return an error message. - Depending on the option given by the user, add or remove the song from the playlist.		
Result or post condition	- The audio list of the playlist will be modified, with a new audio added or an existing audio removed from it.		
Output	String	status	It will be successful if user entered valid data, the user, playlist, and song are found, and the song could be added or removed from the playlist.

Name or identifier	RF006 – Share playlist		
Summary	It allows the user to get the playlist ID and the matrix that generated it, so that other users can access it.		
Input	Input name	Data type	Selection or repetition condition
	consumerName	String	
	playlistId	String	
General activities necessary to obtain the results	- Get the information from user input - Search the consumer and playlist, if they do not exist yet, return an error status. - Get the playlist information (name, id, and matrix) and display it to the user		
Result or post condition	- None		

Output	String	Playlist information	It contains the name, id, and generator matrix of the playlist

Name or identifier	RF007 – Play audio		
Summary	It allows the user to play any audio that exists in the catalogue.		
Input	Input name	Data type	Selection or repetition condition
	consumerName	String	
	playlistId	String	
	audioName	String	
General activities necessary to obtain the results	- Get the information from user input - Search the consumer and audio, if they are not found, return an error message. - Depending on the type of user and the history, play just the selected audio or the audio with advertisement.		
Result or post condition	- None		
Output	String	audio	The audios that are going to be played, advertisements, songs, or podcasts.

Name or identifier	RF008 – Buy songs		
Summary	It allows the user to select a song from the catalogue and add it to his song list.		
Input	Input name	Data type	Selection or repetition condition
	consumerName	String	
	songName	String	
General activities necessary to obtain the results	- Get the information from user input - Search the consumer, if it is not found, return an error message. - Show the available songs (catalogue) and get the name of the song from input.		

	- Check if the song exists in the platform, otherwise, return an error message. - Add the new song to the selected user, if he has no place for it, return an error message.		
Result or post condition	- None		
Output	String	audio	It will be successful if user entered valid data, the user and song are found, and the user have enough places.

Name or identifier	RF9.1 – Total of plays per type		
Summary			
Input	Input name	Data type	Selection or repetition condition
General activities necessary to obtain the results	-		
Result or post condition	-		
Output			