**TABLA DE ESPECIFICACIÓN DEL PROBLEMA DE INGENIERÍA DE SOFTWARE, identificando los siguientes elementos**

| CLIENTE | Neotunes company |
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| USUARIO | Neotunes company and their users. |
| REQUERIMIENTOS FUNCIONALES | -Register producer users |
| CONTEXTO DEL PROBLEMA | The new company Neotunes wants to enter the streaming market of music and audio content. For this, Neotunes have contracted us to develop a software system with all functionalities necessary to satisfy all the demand. |
| REQUERIMIENTOS NO FUNCIONALES | -The prototype must consider the future creation of new user types.  -The prototype must consider the future creation of new audio types. |

**Análisis de requerimientos funcionales:**

| Nombre o identificador | R1. Register producers users | | |
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| Resumen | The system must be able to register artists and content creators. For this, the system requires some data about the producers. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| type | int | If the system is registering a new producer. |
| name | string | If the system is registering a new producer. |
| date | string | If the system is registering a new producer. |
| urlImage | string | If the system is registering a new producer. |
| Actividades generales necesarias para obtener los resultados | The system creates the new producer and save it at the system | | |
| Resultado o postcondición | The new producer will be registered and the system print a message | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| confirm | string | If the producer was created |
| error | string | If the producer was not created |

| Nombre o identificador | R2. Register consumer users. | | |
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| Resumen | There is two types of consumer users: premium and standard users. The system must be able to register both. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| type | int | If the system is registering a new user. |
| nickname | string | If the system is registering a new user. |
| id | string | If the system is registering a new user. |
| date | string | If the system is registering a new user. |
| Actividades generales necesarias para obtener los resultados | The system asociates the new user data with an user object | | |
| Resultado o postcondición | The user will be registered and the sytem return a message tht confirms if the user was registered | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the user was registered |
| error | string | If the user was not registered |

| Nombre o identificador | R3. Register a song | | |
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| Resumen | The system must be able to register songs. For this, it requires some data about the song. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| name | string | if the system is registering a new song |
| album | string |
| gender | int |
| frontPage | string |
| duration | double |
| price | double |
| Actividades generales necesarias para obtener los resultados | The system saves the data in a new song object and intializes the numer of reproduction and the number of sells. | | |
| Resultado o postcondición | The new song will be registered and will be ready to reproduce an sell it | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the song was registered |
| error | string | If the song wasn'tregistered |

| Nombre o identificador | R4.Register podcasts | | |
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| Resumen | The system must be able to register podcasts. For this, it requires some data about the podcast. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| name | string | If the system is registering a new podcast |
| description | string |
| category | int |
| imageUrl | string |
| duration | double |
| Actividades generales necesarias para obtener los resultados | The system saves the data in a new podcast object and intializes the numer of reproductions. | | |
| Resultado o postcondición | The new podcast will be registered and will be ready to reproduce. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the podcast was registered |
| error | string | If the podcast wasn'tregistered |

| Nombre o identificador | R5. Register a playlist | | |
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| Resumen | A playlist is a collection of audio files. For register a playlist, the system must get the name of the new playlist and audio files. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| name | string | If the system is registering a new playlist |
| audiofile | number | If the system is registering a new playlist. This icon will be repeated every how many times the user wants |
| Actividades generales necesarias para obtener los resultados | The system creates a new playList whit the name entered and creates the collection of the audio files entered. | | |
| Resultado o postcondición | The playlist will be registered and it could be shared | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the palyList was registered correctly |
| error | string | If the palyList was not registered |

| Nombre o identificador | R6. Edit a playlist | | |
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| Resumen | The system must be able to edit the name of the playlist or the collection of the playlist. For this, The system asks the user what file he or she wants to edit. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| action | int | If the user is editing a playList |
| name | string | If the user wants to change the name of the playlist |
| fileToDelete | int | If the user wants to delete a file of the playList |
| fileToAdd | int | If the user wants to add a file to the playlist. |
| Actividades generales necesarias para obtener los resultados | The system searches, the character that will be edited and makes the changes. | | |
| Resultado o postcondición | The playlist will be edited. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the playlist was edited. |
| error | string | If the playlist was not edited. |

| Nombre o identificador | R7. Share a playlist | | |
| --- | --- | --- | --- |
| Resumen | The system must be able to share a playlist between users. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| user | int | If the system is sharing a playlist |
| playlist | int | If the user has playlists |
| Actividades generales necesarias para obtener los resultados | The system will create a code to the new playlist based on the types of audio files that there are in the playlist (Podcasts or songs). The system do it using a matrix. | | |
| Resultado o postcondición | The code will be generated | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| code | string | If the user has files |
| error | string | If the user does not have files |

| Nombre o identificador | R8. Simulate reproduction of audio | | |
| --- | --- | --- | --- |
| Resumen | The system must be able to simulate the reproduction of audio for an user. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| user | int | If the system is trying to reproduce audio |
| audio | int | If teh user has audio files |
| Actividades generales necesarias para obtener los resultados | The system searches the audio and creates a string for the file selected. | | |
| Resultado o postcondición | The string will be ready to show | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| audio | string | If the user has audio files |
| error | string | If the user does not have audio files |

| Nombre o identificador | R9. Buy a song | | |
| --- | --- | --- | --- |
| Resumen | The system must allow the purchase of songs. The users can buy songs according to their account type. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| user | int | If the system is selling a song |
| song | int | If the user can buy songs |
| Actividades generales necesarias para obtener los resultados | When the user chooses the song the system will save this song in the user account. | | |
| Resultado o postcondición | The user will have a new song in his account. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the sale was successfully |
| error | string | If the user can not buys more songs |

| Nombre o identificador | R10. Report the number of reproductions for an audio. | | |
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| Resumen | The system must be able to count the times of reproductions for an audio file and the system must be able to show this number for an audio file entered too. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| audio | int | If the there are audio files in the system |
| Actividades generales necesarias para obtener los resultados | The system searches the audio and will get the number of reproductions of the audio. | | |
| Resultado o postcondición | The number will be ready to be shown to the user | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If there are audio files in the system |
| error | string | Is there are not audio files in the system |

| Nombre o identificador | R11. Report the most listened song genre in the system | | |
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| Resumen | The system must be able to know what is the most listened genre and it can count the repeats of reproductions. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| confirm | int | If sistem is trying to shows the most repeated genre |
| Actividades generales necesarias para obtener los resultados | The system searches the most repeated genre, save the genre and its number of reproductions. | | |
| Resultado o postcondición | The information will be ready to be shown. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If there is a most repeated genre |
| error | string | If there’s not a most repeated genre |

| Nombre o identificador | R12. Report the most listened song genre for a specific user. | | |
| --- | --- | --- | --- |
| Resumen | The system must be able to know what is the most listened genre for a specific user and it can count the repeats of reproductions of the user. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| user | int | If the system is trying to show this information for an user. |
| Actividades generales necesarias para obtener los resultados | The system searches the most repeated genre for a user, it saves the genre and its number of reproductions. | | |
| Resultado o postcondición | The information will be ready to be shown. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the user has a most repeated genre already |
| thersno | string | If the user hasn’t a most repeated genre yet |

| Nombre o identificador | R13. Report the most listened podcast category in the system | | |
| --- | --- | --- | --- |
| Resumen | The system must be able to know what is the most listened category and it can count the repeats of reproductions. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| confirm | int | If sistem is trying to shows the most repeated category |
| Actividades generales necesarias para obtener los resultados | The system searches the most repeated category, save the category and its number of reproductions. | | |
| Resultado o postcondición | The information will be ready to be shown. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If there is a most repeated category |
| error | string | If there’s not a most repeated category |

| Nombre o identificador | R14. Report the most listened podcast category for a specific user. | | |
| --- | --- | --- | --- |
| Resumen | The system must be able to know what is the most listened category for a specific user and it can count the repeats of reproductions of the user. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| user | int | If the system is trying to show this information for an user. |
| Actividades generales necesarias para obtener los resultados | The system searches the most repeated category for a user, it saves the category and its number of reproductions. | | |
| Resultado o postcondición | The information will be ready to be shown. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| message | string | If the user has a most repeated category already |
| thersno | string | If the user hasn’t a most repeated category yet |

| Nombre o identificador | R15. Make and show the top five of artists | | |
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| Resumen |  | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
| Resultado o postcondición |  | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
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| Nombre o identificador | R16. Make and show the top five of content creators | | |
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| Resumen |  | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
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| Nombre o identificador | R17. Make and show the top ten of songs | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
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| Nombre o identificador | R18. Make and show the top ten of podcasts | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
| Resultado o postcondición |  | | |
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| Nombre o identificador | R19. Report the total of reproductions and sales value of each genre | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
| Resultado o postcondición |  | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
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| Nombre o identificador | R20. Report the most selled song. | | |
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| Resumen |  | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
| Resultado o postcondición |  | | |
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| Nombre o identificador |  | | |
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| Resumen |  | | |
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| Actividades generales necesarias para obtener los resultados |  | | |
| Resultado o postcondición |  | | |
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