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

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| CUSTOMER | Neotunes |
| USER | Users consumers / producers (artists,) |
| FUNCTIONAL REQUIREMENTS | R1: it shall be possible to register artists  R2: it shall be possible to register content creators  R3: it must be possible to register standard users  R4: must be able to register premium users  R5: it must be possible to register songs  R6: must be able to register podcasts  R7: it must be possible to buy songs  R8: must be able to create playlist  R9: must be able to edit playlits  R10: must be able to share by code  R10: report the accumulated total for podcast, audio and song  R11: report the genre of the most listened song in the whole platform and its number of plays  R12: report the category of a podcast most listened to on the entire platform and the number of reproductions  R13: report the top 5 artists and content creators on the platform, with name and number of plays  R14: report the top 10 songs and podcasts with the name, genre or category and their total number of plays  R15: report the number of songs sold for each genre and the total value of sales  R16: report the total number of sales and its total value for the best selling song of the platform |
| CONTEXT OF THE PROBLEM | A music company asked us to develop a program with different functionalities that will allow them to continue expanding in the future. |
| NON-FUNCTIONAL REQUIREMENTS |  |

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

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| Name or identifier | A1: register artist | | |
| Summary | The producing users can be artists whose name, date of linking and a url with their distinctive image must be registered, and the accumulated number of reproductions and the total time reproduced by the consuming users must be known. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Name | String | No numbers or special characters, min 5 letters |
| Date | Calendar | No dates out of date |
| url | String | Image in jpg format |
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| General activities required to achieve results | The system must register each of the required fields in order to register the artist. | | |
| Result the postcondición | Message the artist's hit record, the total time played by consumers and their cumulative total plays | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| totalReproduction | Int | The registration data is correct |
| HoursReproduction | Int | The registration data is correct |
| message | String | The registration data is correct |
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| Name or identifier | R2: register creator content | | |
| Summary | The system shall allow the registration of content creators with the following data: Name, date of linking, url of representative image and it shall be possible to know the total hours accumulated by users and the total number of reproductions. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Name | String | No numbers or special characters, min 5 letters |
| Date | Calendar | No dates out of date |
| url | String | Image in jpg format |
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| General activities required to achieve results | The system must register each of the required fields in order to register the artist. | | |
| Result the postcondición | Message the artist's hit record, the total time played by consumers and their cumulative total plays | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| totalReproduction | Int | The registration data is correct |
| HoursReproduction | Int | The registration data is correct |
| message | String | The registration data is correct |
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| Name or identifier | R3: register user standart | | |
| Summary | The system shall allow to register users as standard with a nickname, ID number and date of connection. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Nickname | String | Must contain at least 3 characters |
| License | String | 10 characters without letters or symbols |
| VinculationDate | Date | Do not place untimely dates |
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| General activities required to achieve results | The system must validate that the data are duly filled in and that each one of them corresponds to the established criteria. | | |
| Result the postcondición | Successful user registration message | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | There were no data entry errors |
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| Name or identifier | R4: register user premium | | |
| Summary | The system shall allow to register a premium user with a nickname, ID and linking date. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Nickname | String | Must contain at least 3 characters |
| License | String | 10 characters without letters or symbols |
| VinculationDate | Date | Do not place untimely dates |
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| General activities required to achieve results | The system must validate that the data are duly filled in and that each one of them corresponds to the established criteria. | | |
| Result the postcondición | Successful user registration message | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | There were no data entry errors |
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| Name or identifier | R5: register songs | | |
| Summary | The system shall be able to register songs for the producer user type of artist type. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| number | String | Minimum 3 characters |
| album | String | It cannot be empty |
| Gender | String | They cannot be letters or symbols |
| url | String | It cannot be empty |
| Duration | Int | Cannot be negative values |
| ValuePay | Double | No negative numbers or letters |
| unitsSold | Int | No negative values |
| General activities required to achieve results | The system must validate that all fields are filled out and duly filled out according to the particular criteria for each specific entry. | | |
| Result the postcondición | Registered song confirmation message | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | No error in input data |
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| Name or identifier | R6: registrar podcast | | |
| Summary | The system must be able to record the type of content generated by content creators, in this case particularly podcasts. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| number | String | Minimum 3 characters |
| album | String | It cannot be empty |
| Category | String | They cannot be letters or symbols |
| url | String | It cannot be empty |
| Duration | Int | Cannot be negative values |
|  | unitsSold | Int | No negative values |
| General activities required to achieve results | The system must validate that all fields are filled out and duly filled out according to the particular criteria for each specific entry. | | |
| Result the postcondición | Registered podcast confirmation message | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | No error in input data |
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| Name or identifier | A7: Buy songs | | |
| Summary | The system must allow the purchase of songs for consumer users | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| valuePay | Double | No negative values |
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| General activities required to achieve results | The system must validate the type of user who wants to perform the action, in case it is a standard user it must be taken into account that this has a limit of 100 cations to buy and therefore for each song you acquire you must be discounted until you reach 0 and can not buy more | | |
| Result the postcondición | Message song acquired successfully | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | That in case of being a standard user has not exceeded the purchase limit |
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| Name or identifier | R8: créate a playlist | | |
| Summary | it should be possible to create a playlist for each type of user. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Name | String | Min 3 characters |
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| General activities required to achieve results | standard users will be limited to 20 playlists and premium users will be unlimited. | | |
| Result the postcondición | playlist successfully created | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | Data enter valid |
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| Name or identifier | R9:edit playlist | | |
| Summary | it should be possible to edit the playlist for each type of user. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| option | Int | No negative numbers |
| optionPlaylist | int | No negative numbers |
| Nickname | String | Valid nickname |
| optionSong | Object Audio | Select a number accord if the options |
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| General activities required to achieve results | it should be possible to add songs to the playlist and remove content from them as well. | | |
| Result the postcondición | successful modification | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| Message | String | Data enter valid |
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| Name or identifier | R10: share code | | |
| Summary | the system should allow to share a song, podcast, etc. by means of a code. | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
| Option | Int | No negativa numbers |
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| General activities required to achieve results | depending on the 3 options selected by the user, a type of reocorrido should be made which will generate the respective codes to share. | | |
| Result the postcondición | the respective code | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| Message | String | Data enter valid |
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| Name or identifier | R11: cumulative total of views | | |
| Summary | The system should allow you to determine the total cumulative views for podcasts and songs across the platform | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | The system must add the music playback ie for songs and podcasts | | |
| Result the postcondición | Message showing cumulative total plays on songs and cumulative total podcast views | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | Has content registered on the platform |
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| Name or identifier | R12: most listened to genre | | |
| Summary | The system must allow to determine which is the genre of song most listened to on the platform and the number of reproductions of the same | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | The system must compare between all the songs registered in the system the genre and the number of reproductions for these | | |
| Result the postcondición | Screen with the most listened genre and the number of reproductions | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| Message | String | That there is content registered on the platform |
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| Name or identifier | R13: most listened to category | | |
| Summary | The system must allow to determine which is the category of podcast most listened to on the platform and the number of reproductions of the same | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | The system must compare between all the podcasts registered in the system the genre and the number of reproductions for these | | |
| Result the postcondición | Message on screen with the most listened to category and the number of reproductions | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| Message | String | That there is content registered on the platform |
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| Name or identifier | R14: top 5 artists and creators | | |
| Summary | The system should allow to determine the top 5 artists and content creators with their names and number of reproductions | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | The system must first buy the ones with the largest number of reproductions and the respective name of each one | | |
| Result the postcondición | On-screen message with top information with names and number of reproductions for each one | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| Message | String | Registered content |
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| Name or identifier | R15: top 10 cations and podcast | | |
| Summary | The system should allow to determine the top 10 songs and podcast with more reproductions and the name of these on the platform | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | You should compare among all the content in general those that have more reproductions to be able to be informed with your name | | |
| Result the postcondición | Message with the top 10 of the songs and podcast with their playback number and respective name | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| String | message | Registered content |
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| Name or identifier | R16: number of songs sold by genre | | |
| Summary | The system must allow to determine the number of songs sold for each genre and in addition to this the total value of sales for each of these | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | You must count the number of songs that correspond to each genre in particular and to this add the total value of sales of the songs by the genre | | |
| Result the postcondición | Message with the number of songs by genre and their value in sales | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | Registered content |
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| Name or identifier | R17: best-selling song | | |
| Summary | The system should allow to determine the best-selling song of the platform, as well as the total number of sales and the value of those sales | | |
| Tickets | Entry name | Data type | Selection or repetition condition |
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| General activities required to achieve results | You should compare the songs to determine which is the best seller and thus be able to know the number of sales to finally know the value for sales of the song | | |
| Result the postcondición | On-screen message with song name, sales number, and sales value | | |
| Outputs | Entry name | Data type | Selection or repetition condition |
| message | String | Registered content |
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