Derivation of use cases:

REQ1: The user will be able to log into their account.

REQ2: The user will have a playlist created for them based on different news topics.

REQ3: The user will be able to specify genres added to the song list.

REQ4: The user can choose the amount of songs in the list.

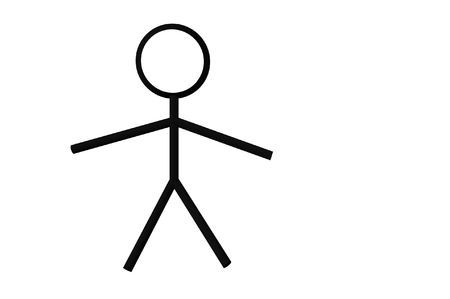
REQ5: The user can listen to the playlist with their account.

REQ6: Song lengths can be specified by the user.

REQ7: The user will be able to log out of their account.

|  |  |  |
| --- | --- | --- |
| Actor | Actors goal | Use case name |
| Initiating actor | To log into their account | LogIn (UC-1) |
| Initiating actor | To pull keywords from relevant news topics | TopicSearch (UC-2) |
| Initiating actor | To use the key words from new topics to search for relevant song titles | SongSearch (UC-3) |
| Initiating actor | To use the songs found to create a playlist based upon that day’s news | CreatePlaylist (UC-4) |
| Initiating actor | To specify the amount of songs within the playlist | SongQuantity(UC-5) |
| Initiating actor | To specify the genre of music to be added to the playlist | SpecifyGenre(UC-6) |
| Initiating actor | To specify the length off songs to be added to the playlist | SpecifyLength(UC-7) |
| Initiating actor | To listen to the music added to the playlist | Listen(UC-8) |
| Initiating actor | To log out of their account | LogOut(UC-9) |
| NewsTopicPull | To pull relevant words from news articles on the internet | TopicSearch (UC-2) |
| SongNewsSearch | To use the keywords to search for songs which relate to that word | SongSearch (UC-3) |
| PlaylistCreation | To create a Spotify playlist using the songs found | CreatePlaylist (UC-4) |
| PlayPlaylist | To play the playlist which has been created on Spotify | Listen(UC-8) |

Use case Diagram:



Traceability Matrix:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| REQ | PW | UC-1 | UC-2 | UC-3 | UC-4 | UC-5 | UC-6 | UC-7 | UC-8 | UC-9 |
| REQ1 | 5 | X |  |  |  |  |  |  |  | X |
| REQ2 | 5 |  | X | X | X |  |  |  |  |  |
| REQ3 | 2 |  | X | X | X |  | X |  |  |  |
| REQ4 | 3 |  | X | X | X | X |  |  |  |  |
| REQ5 | 4 |  | X | X | X |  |  |  | X |  |
| REQ6 | 3 |  | X | X | X |  |  | X |  |  |
| REQ7 | 5 | X |  |  |  |  |  |  |  | X |
| Max PW | | 4 | 5 | 4 | 4 | 2 | 1 | 2 | 5 | 3 |
| Total PW | | 13 | 15 | 9 | 8 | 4 | 2 | 3 | 8 | 10 |

Use case schemas:

|  |  |
| --- | --- |
| Use case UC-1 | Login |
| Related Requirements | REQ1, REQ7 |
| Initiating Actor | User |
| Actors Goal | To log into their account |
| Participating Actors | NA |
| Preconditions | The user is not logged into their account |
| Post conditions | The user is logged into their account and can begin a song search |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-2 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-3 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-4 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-5 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-6 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-7 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-8 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |

|  |  |
| --- | --- |
| Use case UC-9 |  |
| Related Requirements |  |
| Initiating Actor |  |
| Actors Goal |  |
| Participating Actors |  |
| Preconditions |  |
| Post conditions |  |
| Flow of events for main success scenario |  |