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Exploratory Testing

Sessions 1-4

## Identify Specific Areas For Exploratory Testing

For Exploratory Testing the main functionalities that will be focused on are:

* Search
* Managing Playlist

## Plan Exploratory Testing Sessions

Since the project is on the smaller side, we will plan on 4 sessions each 1hour of active testing to test the selected functionality and overall system through different approaches.

## Test Charter Creation

**Session 1:** Perform a Landmark tour, identifying and testing all means of searching for data and methods of managing a playlist. Document any results that went against expectations or errors. Focus is on key functionalities and how they impact each other

**Session 2:** Ensure that multiple instances can be live with users performing core functionalities without impacting each other (TOGOF Tour). Focus is on core functionalities while in the situation where there are multiple instances of the system simultaneously performing actions.

**Session 3:** Perform a general Garbage Collector’s Tour, touching on every aspect of the system, and then leave the system running for 24 hours and perform test again. Document any findings where leaving the system running for long periods have affected the system or errors that occurred. (All Nighter Tour) Focus is on the overall systems behavior and any changes after running for a long period of time.

**Session 4:** Test general search and management of playlist functionality while actively reducing or removing connections to the internet. Document any findings or errors that occur. (Saboteur Tour) Focus is on the overall system when having required resources throttled or cut off

## Exploratory Session’s Findings

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| Test Tour | Session 1: Landmark Tour (EX-004) |
| Object to be tested / Rough Guidance | Search functionality & managing playlist functionality |
| JIRA Issue  (Link or Text) | N/A |
| Test Duration  (Execution) | 45 minutes |
| Tester | Gretchen(self) |
| Further Testing Opportunities? | None at this time |

**Protocol**

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| --- | --- | --- | --- |
| Nr | What done? | Status | Comment |
| 1 | Tested main search input with various content such as: ‘artist’, ‘track’, ‘Coheed’ |  | Observed that search can not be triggered with keyboard when focused on search input or type dropdown (eg. enter key)  Observed if there is no content in search box search button is disabled |
| 2 | Tested main search input with various content such as: ‘qUeEn’, ‘QUE’, ‘Que’ |  | Observed that upper or lower case would change the order of artists and tracks returned but not exclude data |
| 3 | Tested main search input with various content such as  ‘a’, ‘reason’, ‘reasonreasonreasonreason’, ‘aaaaaa’ |  | Observed that if entered the same content repeated it still returns content that matches a single instance of it |
| 4 | Typed ‘Queen’ into Search input, with type dropdown set to ‘All’. Returns artists and tracks, selected/clicked ‘Queen’ under artists |  | Unexpected behavior that when clicking a selected an artist listed the search performed does not return music only by that artist, instead it returns tracks by the artist or by other artists with the tracks whose names include same content (aka it performs search for tracks based on content matching text in artists name) |
| 5 | Searched for ‘Queen’ with Type set to Artist |  | Observed that the artist data list returned is the same just shorter when type is set to All  Observed that the Type Dropdown auto resets to All after search button was clicked |
| 6 | Searched for ‘Queen’ Type of Track’. Clicked Add on top 5 results |  | Playlist auto opened when first song was added and songs would render under the previous after their Add button was clicked |
| 7 | Searched for ‘Queen’ Type of Track’. Clicked Add on same track 5 times |  | Playlist auto opened after the first click of the Add button and the same song would successfully be added and render under the previous instance of the song |
| 8 | Searched for ‘Queen’ Type of Track’. Clicked Add on same track 5 times. Then click ‘Remove’ on 2 of the repeated songs in playlist. Refreshed page. |  | Observed that repeats of a song could be added and removed from playlist and successfully persisted on reload of page |
| 9 | Added multiple songs to Playlist, refresh page, click ‘Clear List’, refresh page |  | Observed Playlist on refresh persisted while the current search data was cleared and returned to initial display of ‘Getting Started’  Upon ‘Clear list’ playlist drawer empties and hides, on refresh remains hidden |
| 10 | Added multiple songs to Playlist, close window, open browser and return to system |  | Upon reloading a browser window with the site the playlist drawer opens with songs previously entered |
| 11 | Went through devtools and removed the disable from the Search button, left search input empty and clicked ‘Search’ |  | Observed that upon clicking the Search button with no content in search input there was no effect on the system nor error in console or networks tab |
| 12 | Click into window, click Tab to select search input, add content, tab to Type dropdown, use arrow keys to select ‘Track’, click Tab to select ‘Search’ button, click enter key |  | Was able to successfully navigate search input, type dropdown, and execute search function only using keyboard |
| 13 | Click into window with track data, navigate with tab and shift + tab to select ‘Add’ buttons, clicking enter key to add songs |  | Was able to successfully navigate with keyboard and add and remove songs from playlist, as well as clear the playlist  Observed that in order to access the playlist had to tab through the full list of tracks being displayed first |
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Suggestions for Improvement (based on Session 1)

* When a user clicks on an Artist image, the search performed should be for tracks specifically BY that artist. Not for tracks that happen to contain content matching artist name
* Setup that if search input or type dropdown is focused, user should be able to click enter to trigger a search to be made
* Need to update order of being able to tab through data so that users can opt to skip going through the whole list of results and not have to tab through 30+ tracks to get access to their playlist
* When Clearing a playlist there is no success message, only feed back the user has is that the drawer empties quickly followed by hiding which makes the success easily missed. Communicate more clearly that the playlist was successfully deleted.

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| Test Tour | Session 2: TOGOF Tour (EX-001) |
| Object to be tested / Rough Guidance | High level test of functionality of whole system with 2 instances running and their impact on each other |
| JIRA Issue  (Link or Text) | N/A |
| Test Duration  (Execution) | 30 minutes |
| Tester | Gretchen(self) |
| Further Testing Opportunities? | Test across multiple browser types |

**Protocol**

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| --- | --- | --- | --- |
| Nr | What done? | Status | Comment |
| 1 | In instance 1, complete a search and add 2 tracks |  | There appears to be no effect on 2nd instance |
| 2 | In instance 1, complete a search and add 2 tracks, In instance 2, complete a different search and add 2 tracks, refresh both instances |  | In 1 browser there is 1 list state saved that is shared, since the 2nd instance was adding to an ‘empty’ list it over wrote what was added in the first instance |
| 3 | With Tracks in playlist, add 2 tracks to 1st instance and then refresh both instances |  | Confirmed that every instance in the same browser shares the same playlist state, if any data is added /removed from 1 instance it will show up in the other instance on refresh |
| 4 | With Tracks in playlist, remove 2 tracks from 1st instance and then refresh both instances |  | Data from shared list is successfully removed and reflected in both instances |
| 5 | With Tracks in playlist, Click ‘Clear List’ button, and then complete a search and add 2 tracks |  | Data from shared list is successfully cleared and then additions are reflected in both instances |
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Suggestions for Improvement (based on Session 2)

* There is only 1 version of the play list stored in a browser’s local storage, suggestion is to have unique local storage keys be generated for new instances of play list. Since these are meant to be short lived shared playlists, each unique playlist in local storage should also have a specific time to live set to clear after a week

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| Test Tour | Session 3: Garbage Collector’s Tour & All Nighter Tour (EX-003) |
| Object to be tested / Rough Guidance | High level test of functionality of whole system before and after running for 24 hours |
| JIRA Issue  (Link or Text) | N/A |
| Test Duration  (Execution) | 2 sessions, each 10 minutes |
| Tester | Gretchen(self) |
| Further Testing Opportunities? | Perform tests in combination with multiple instances |

**Protocol**

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| --- | --- | --- | --- |
| Nr | What done? | Status | Comment |
| 1 | Initial High Level Test through System:  Searched for artist, selected an artist, added multiple tracks to play list from data results. Removed multiple tracks from Playlist. Searched for data by Type of track, added multiple tracks to playlist, removed multiple tracks from playlist. Refreshed page, clicked ‘Clear All’ on playlist. Searched for Type all, added multiple tracks to playlist |  | This was the initial test that was performed to touch on every aspect of the system at a high level when the software was initially started up |
| 2 | Final High Level Test through System: left the application running for over 48 hours and performed same steps as the initial high level test |  | Results were same as in the initial test and the core features functioned as expected |

Suggestions for Improvement (based on Session 3)

* No suggestions for improvement based on session 3 all nightery garbage collector’s tour

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| Test Tour | Session 4: Saboteur Tour (EX-002) |
| Object to be tested / Rough Guidance | Main features of search and managing playlist while the overall system when having required resources throttled or cut off |
| JIRA Issue  (Link or Text) | N/A |
| Test Duration  (Execution) | 30minutes |
| Tester | Gretchen(self) |
| Further Testing Opportunities? | Utilize a tool that helps perform stress tests of large amounts of requests at once |

**Protocol**

*Each of the below tests follow the same steps: Perform a search, add multiple tracks to playlist, remove 2 tracks, and then clear list*

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| Nr | What done? | Status | Comment |
| 1 | Selected to ‘Disabled Cache’ and throttled network to fast 4G |  | Was a delay in loading images |
| 2 | Selected to ‘Disabled Cache’ and throttled network to slow 4G |  | Delay in loading initial application and in displaying search results |
| 3 | Selected to ‘Disabled Cache’ and throttled network to 3G |  | Very long delay in loading initial application and there was long delays between loading results and completing searches |

Suggestions for Improvement (based on Session 4)

* When experiencing slow networks some of the information is slow to display, could display a backup image until line item’s image is ready to show
* On the very slow experiences with mimicking 3G could click on an artist to search for and it would take 5 seconds to visually get feedback that the click was registered, and the search was being made. The artist’s background could change color on click or add a small loading spinner over the artists icon if waiting for search to complete