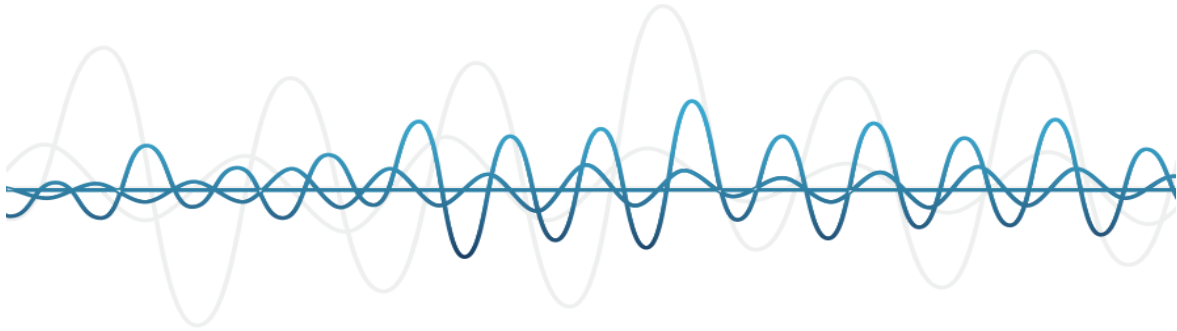


# MusicHub

A Social Media Platform for Music



## Scenario Summary

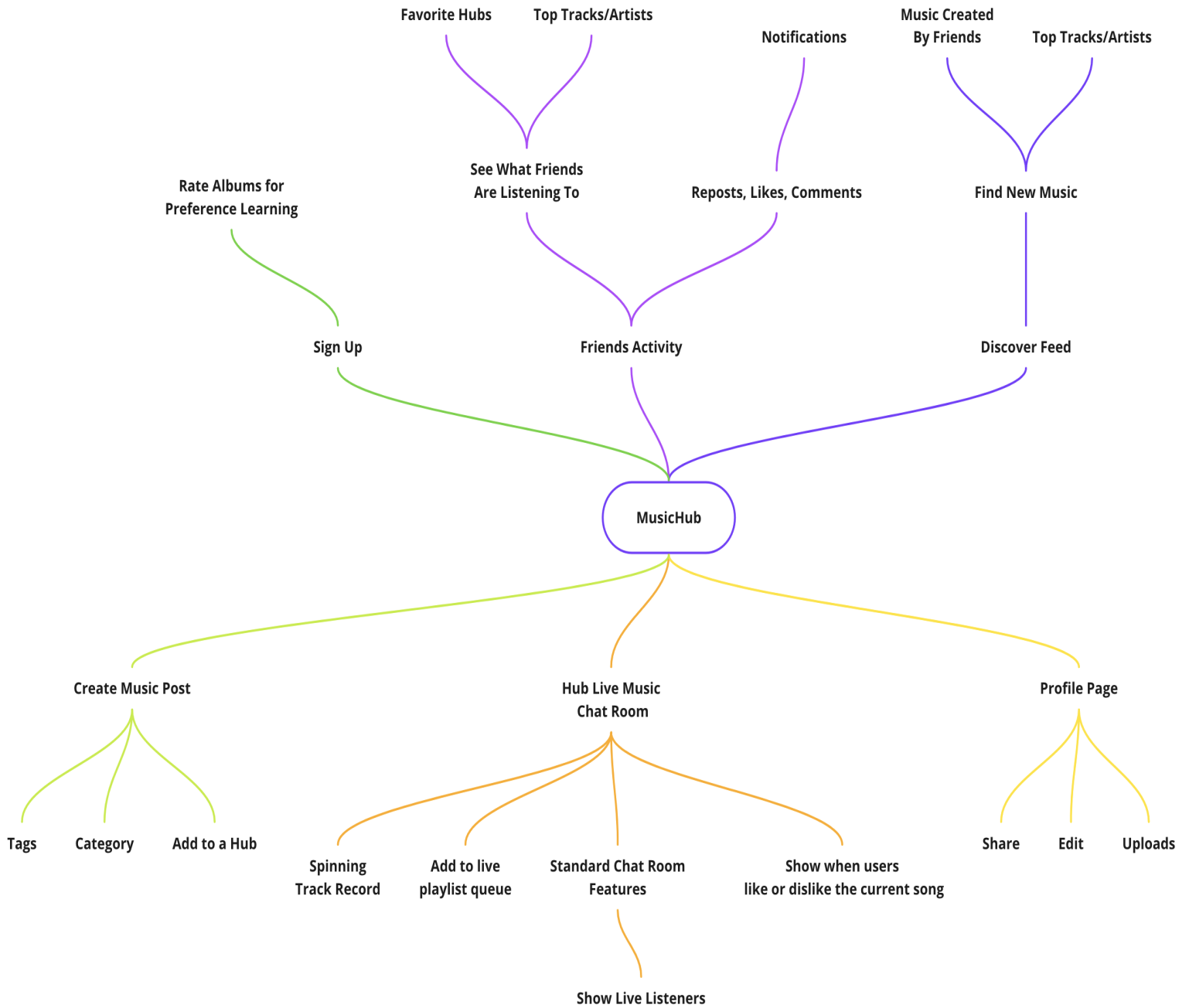
MusicHub is a social media application centered around listening to music together. On this platform, users will be able to discover, discuss and share music created by the community as well as major artists around the world.

## Team

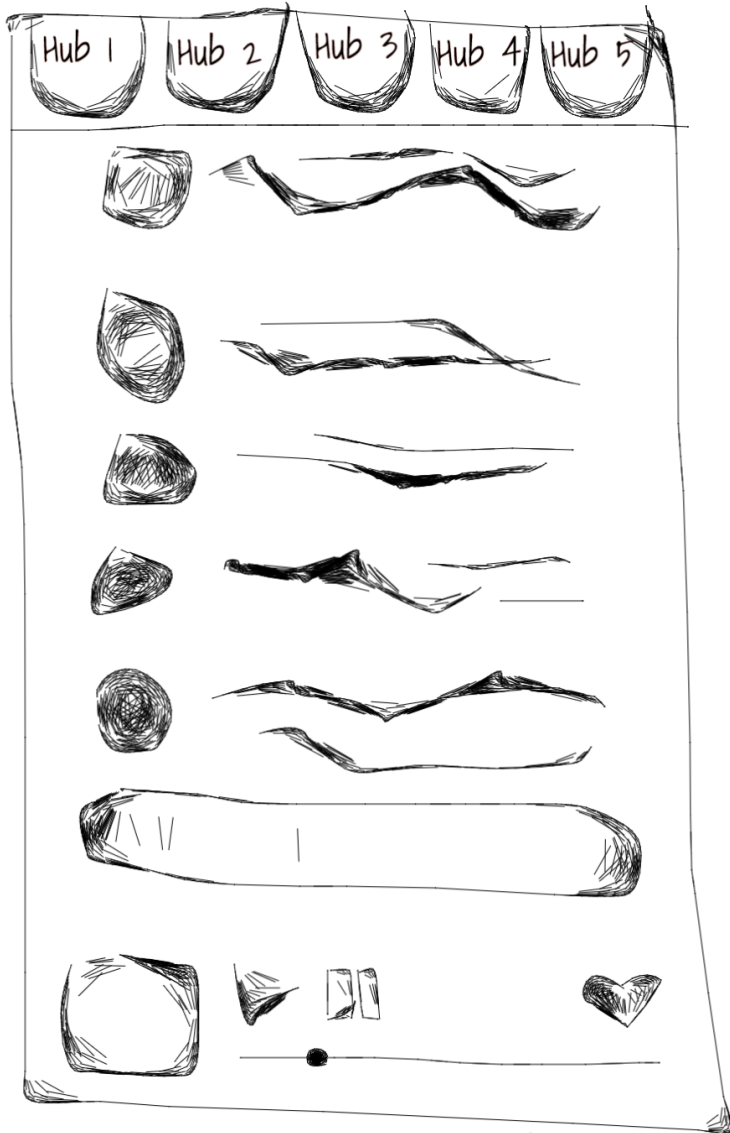
Arjun Tyagi  
Bryan Snyder  
Ziyu Song

**Documentation has been edited to highlight design work created and completed by Arjun Tyagi.**

# Ideation Artifacts: Created By Arjun Tyagi

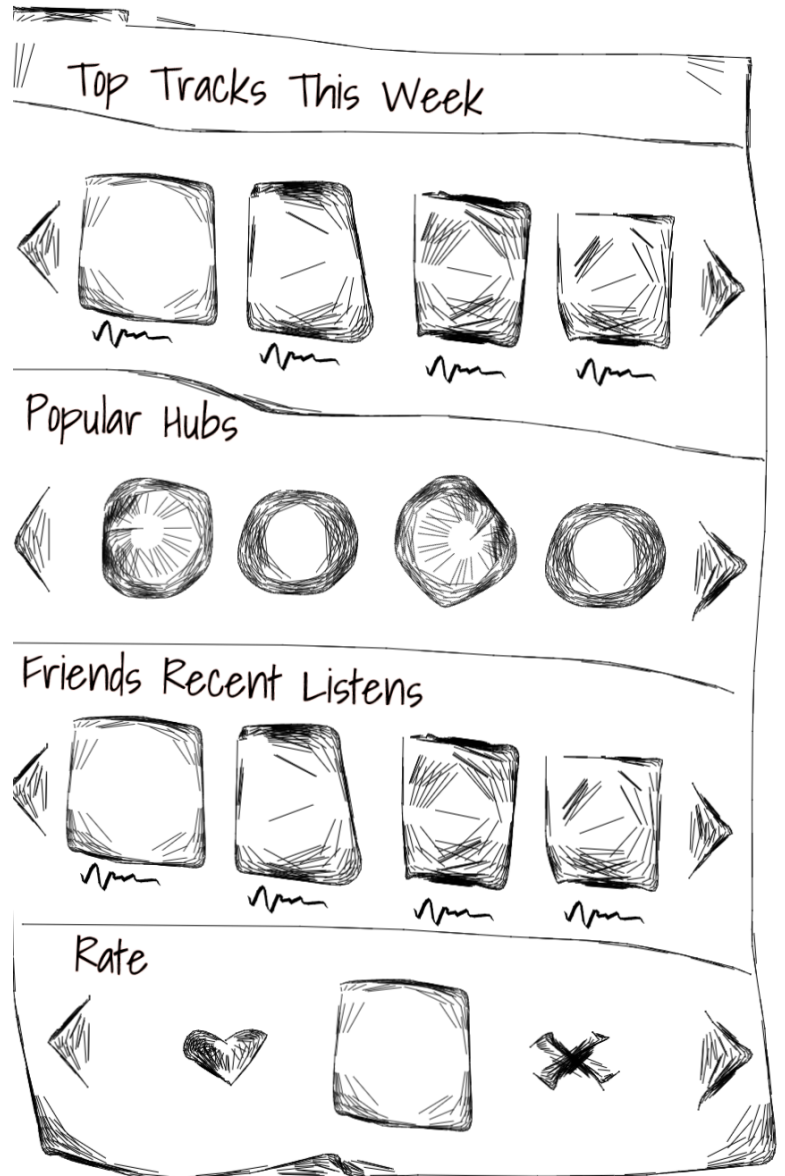


# Live Music Chat Room



Arjun Tyagi

# Discover Feed



Arjun Tyagi

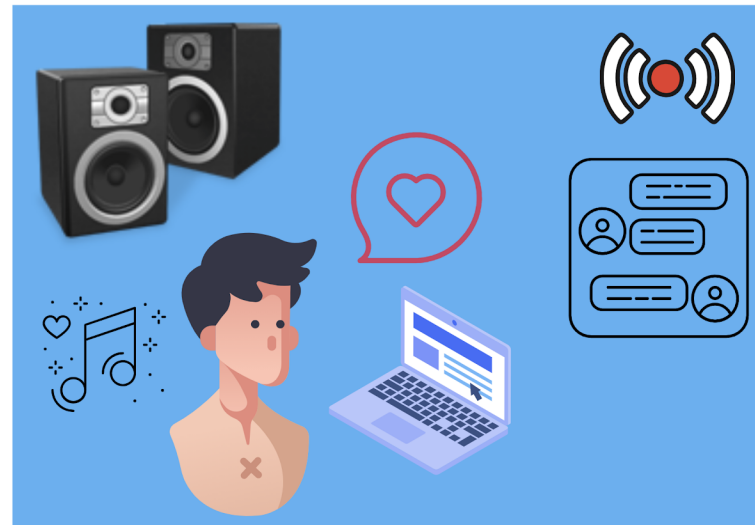
# Storyboard: Live Music Chat Room

Created By Arjun Tyagi



Tony enjoys listening to Jazz music. Since most of Tony's friends don't share his music taste, he rarely gets to talk about Jazz. While searching online, Tony finds MusicHub.

Script



Tony creates an account for MusicHub and starts browsing various hubs for his favorite music genres.

Action

Tony finds a hub for live Jazz music and is entertained with how lively and interactive the chat room feels.

Script

Tony presses the heart button to let everyone in the hub know that he likes the current song.

Action



As Tony spends more time in the Jazz Hub, he becomes a part of this new community and gains friends. Talking to people all over the world has helped expand his taste in music.

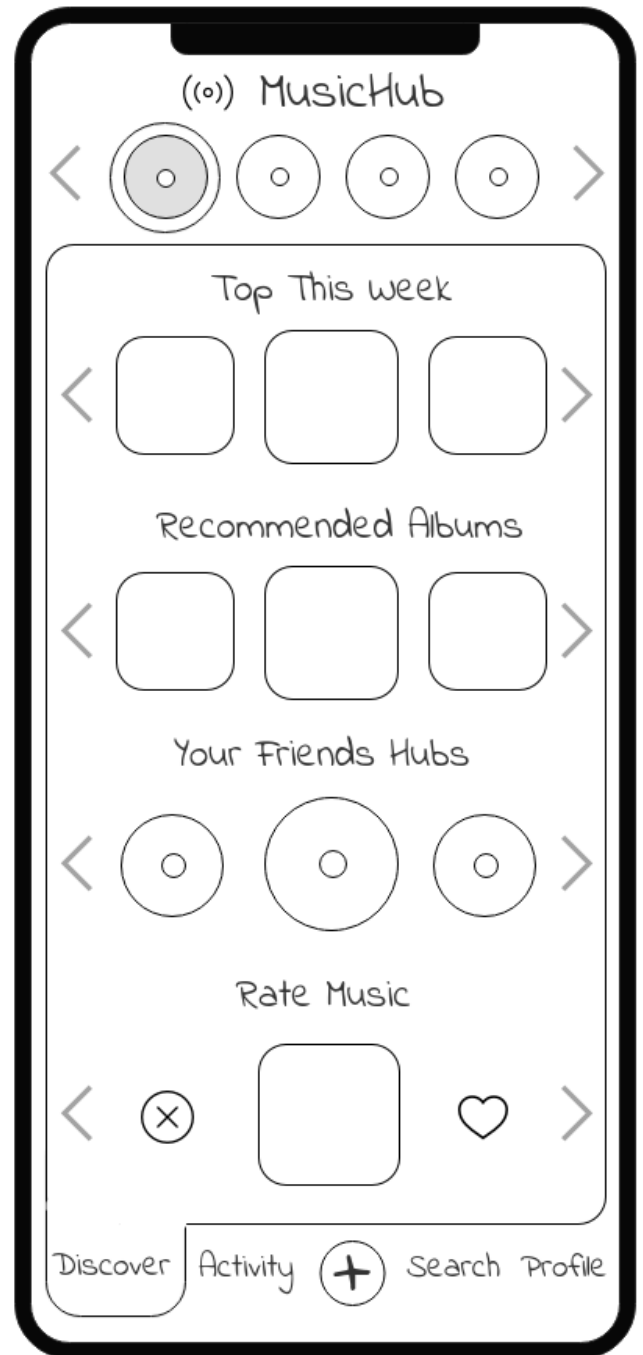
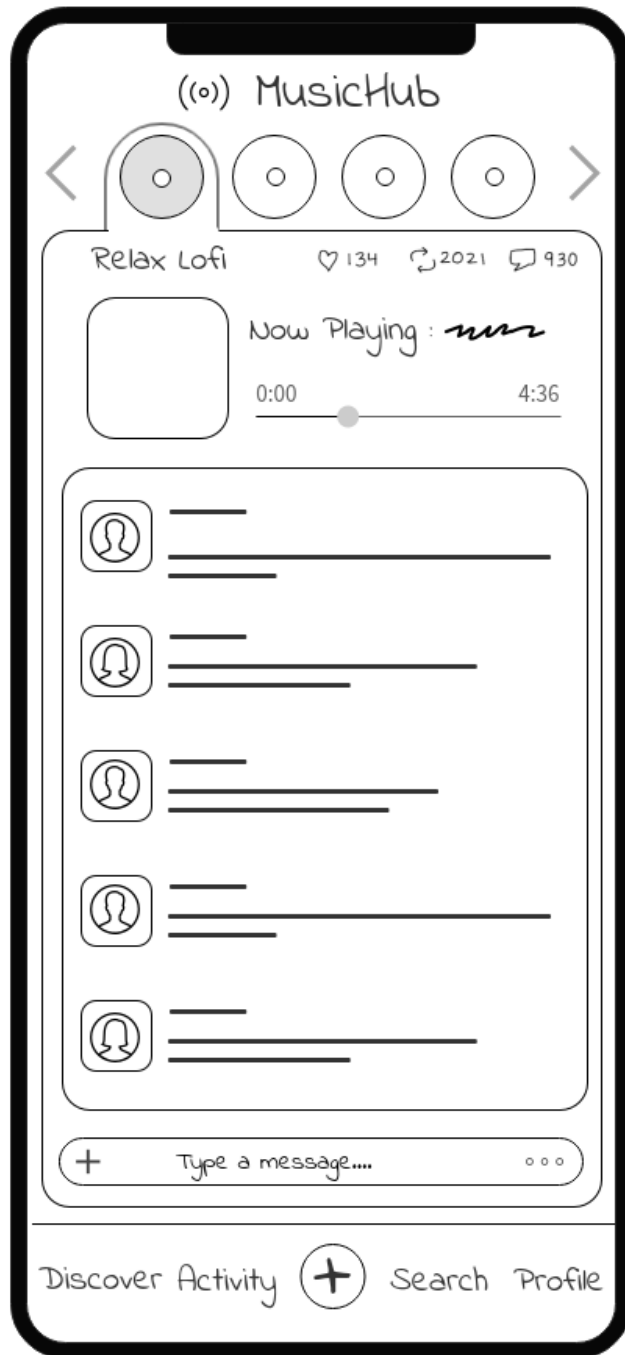
Script

Tony frequently starts conversations and adds tracks recommendations to the live music queue/playlist.

Action

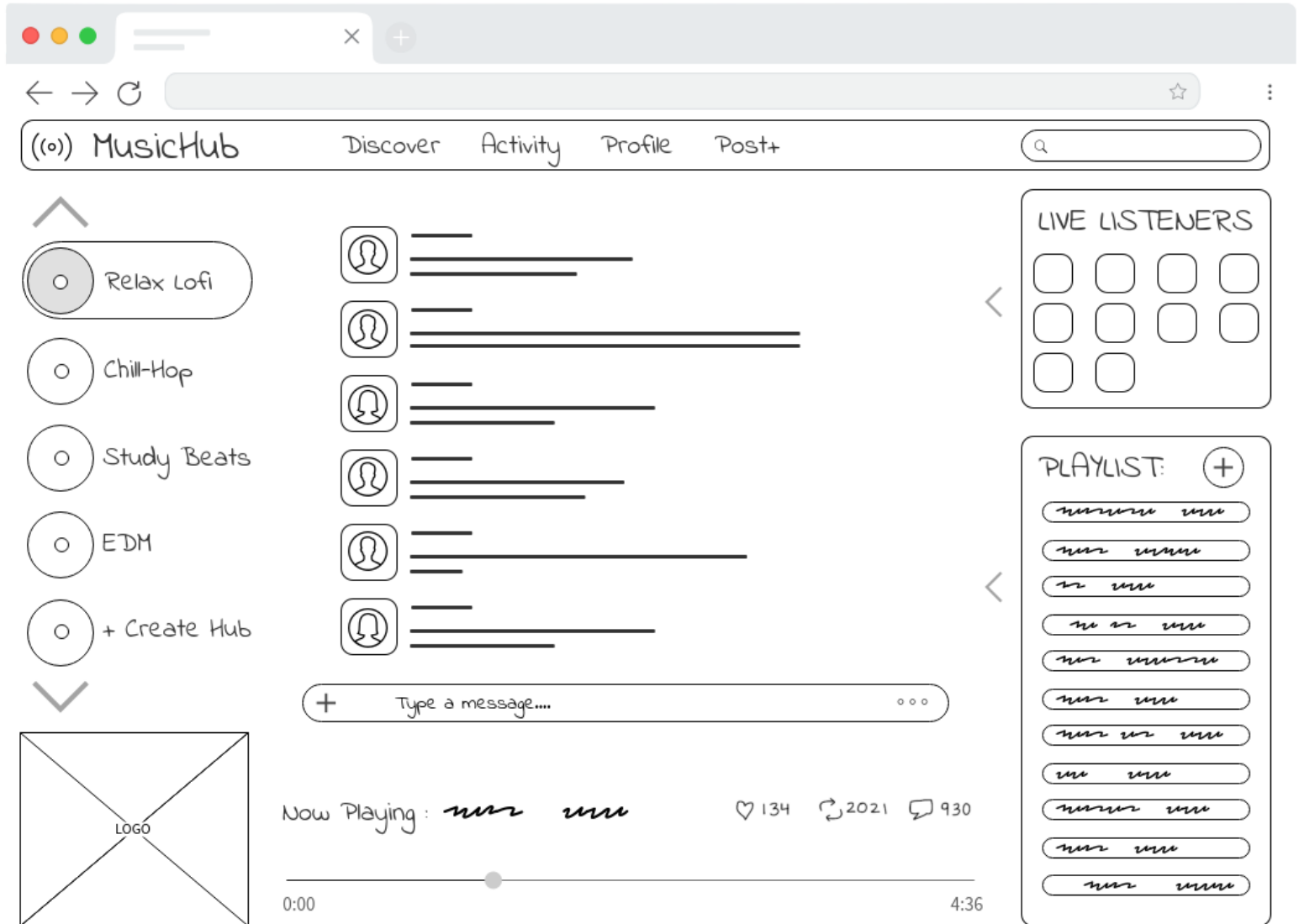
# Mobile Wireframes: Live Chat Room & Discover Screens

Created By Arjun Tyagi



# Web Wireframe: Live Chat Room & Discover

Created By Arjun Tyagi

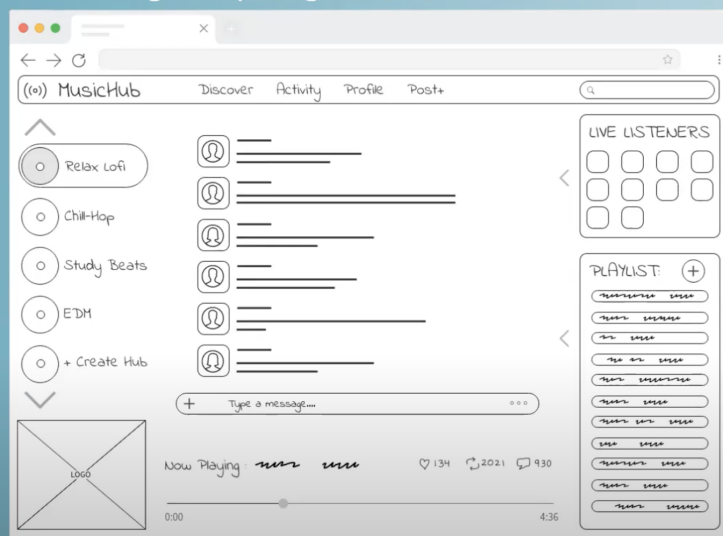


# Wireframe Cognitive Walkthrough Sessions

## Video Link:

<https://uci.yuja.com/V/Video?v=2609890&node=9361816&a=547916213&autoplay=1>

**Scenario:** You are in the Relax Lofi Hub and love listening to Lofi music while working. A song that's playing catches your attention.



**Task 2:** Favorite the currently playing song and repost it.

## Evaluator Name: Omitted

|                                                                                                                   | Will the user know what to do at this step?: | If the user does the right thing, will they know that they did the right thing and are making progress toward the goal?         | Notes                                          |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Live Chat Room Web Interface</b>                                                                               |                                              |                                                                                                                                 |                                                |
| <b>Task 1:</b> Write a message in the chat about how much you like the song.                                      | Yes                                          | Yes                                                                                                                             |                                                |
| <b>Task 2:</b> Favorite the currently playing song and repost it.                                                 | Yes                                          | Yes                                                                                                                             | Confused about where currently playing song is |
| <b>Task 3:</b> Add a new song to the live playlist queue for the hub.                                             | yes                                          | Yes                                                                                                                             |                                                |
| <b>Task 4:</b> Switch to the EDM Hub.                                                                             | Yes                                          | Yes                                                                                                                             |                                                |
| <b>Discover Page Mobile Interface</b>                                                                             |                                              |                                                                                                                                 |                                                |
| <b>Task 5:</b> Browse through the carousel for Recommended Albums                                                 | Yes                                          | Yes                                                                                                                             |                                                |
| <b>Task 6:</b> Rate a song to improve your suggestions. If you don't want to rate the song, how will you skip it? | Yes                                          | No. They weren't sure what it meant to skip a song when rating it. They were confused with skipping a song versus disliking it. | Thought skipping a song was the x button       |
| <b>Profile Page Mobile Interface</b>                                                                              |                                              |                                                                                                                                 |                                                |

|                                                                                           |     |     |  |
|-------------------------------------------------------------------------------------------|-----|-----|--|
| <b>Task 7:</b> Find the most recent song you have uploaded and edit the post.             | Yes | Yes |  |
| <b>Task 8:</b> Find the most recent song you have uploaded and find the comments section. | Yes | Yes |  |

### Feedback :

1. Likes the comments at center of screen. Rate music was not easy to interact with the first time. There were confusing icons.
2. Nice to have a message at the center, main page looks good. Make "Like" and "Repost" buttons bigger might be better. "Rate Music" section is not easy to see at the first time, and what does the "x" button mean.

### Evaluator Name: Omitted

|                                                                              | Will the user know what to do at this step?: | If the user does the right thing, will they know that they did the right thing and are making progress toward the goal? | Notes |
|------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------|
| <b>Live Chat Room Web Interface</b>                                          |                                              |                                                                                                                         |       |
| <b>Task 1:</b> Write a message in the chat about how much you like the song. | Yes                                          | Yes                                                                                                                     |       |
| <b>Task 2:</b> Favorite the currently playing song and repost it.            | Yes                                          | Yes                                                                                                                     |       |
| <b>Task 3:</b> Add a new song to the live playlist queue for the hub.        | Yes                                          | Yes                                                                                                                     |       |
| <b>Task 4:</b> Switch to the EDM Hub.                                        | Yes                                          | Yes                                                                                                                     |       |

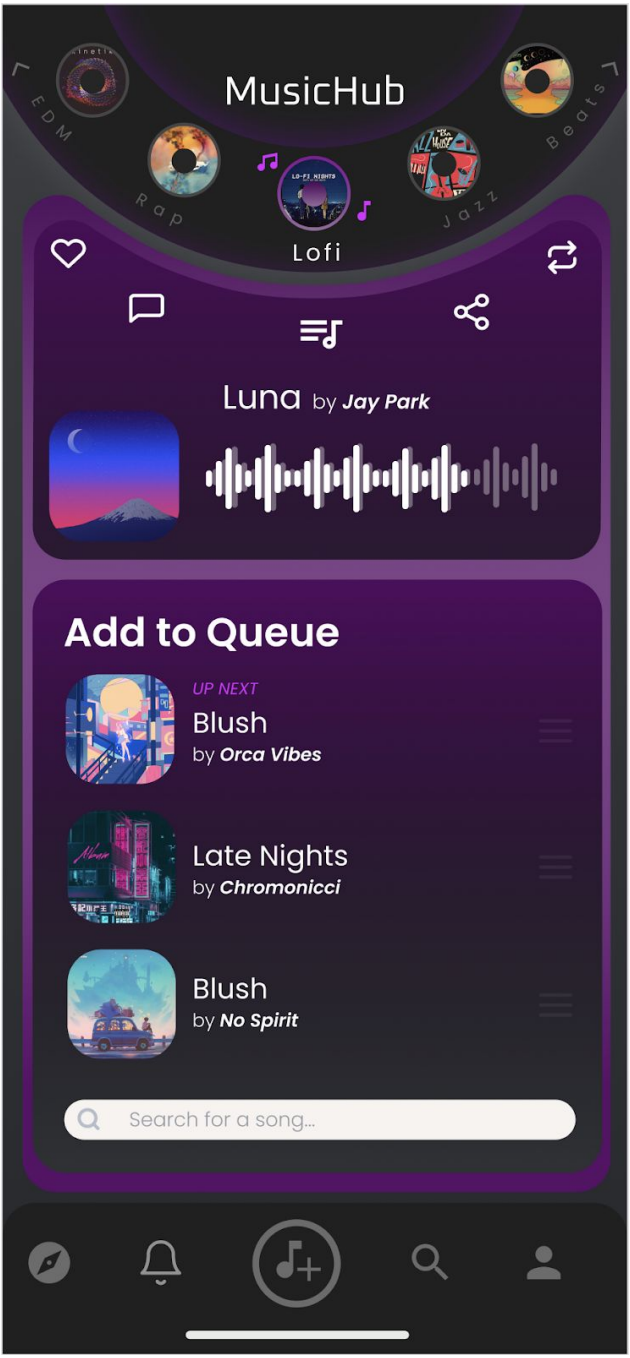
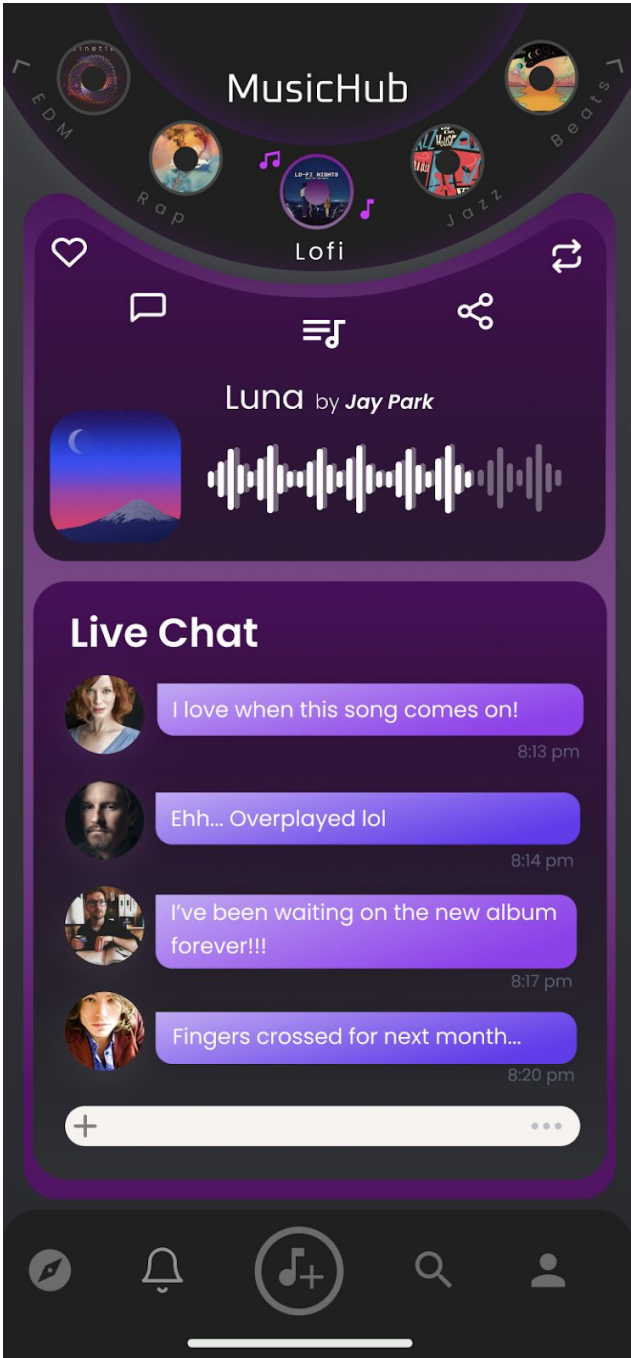
|                                                                                                                   |     |     |                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------|-----|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Discover Page<br/>Mobile Interface</b>                                                                         |     |     |                                                                                                                                                           |
| <b>Task 5:</b> Browse through the carousel for Recommended Albums                                                 | Yes | Yes |                                                                                                                                                           |
| <b>Task 6:</b> Rate a song to improve your suggestions. If you don't want to rate the song, how will you skip it? | Yes | Yes | Understood that the X is if you don't like the song, and the heart is to like the song. If you don't want to rate the song, click on right arrow to skip. |
| <b>Profile Page<br/>Mobile Interface</b>                                                                          |     |     |                                                                                                                                                           |
| <b>Task 7:</b> Find the most recent song you have uploaded and edit the post.                                     | Yes | Yes |                                                                                                                                                           |
| <b>Task 8:</b> Find the most recent song you have uploaded and find the comments section.                         | Yes | Yes |                                                                                                                                                           |

## Feedback:

1. Likes the app idea. Interface is nice, but there's a lot to take in at first. Arrows next to the playlist and live listeners on the web interface weren't clear but the idea is cool.
2. Interface looks right, at first there's so many things to see in the web version, curious what do the arrows do besides the "live listeners" and "playlist" sections. Like the Friends feature in Discover and the profile. Curious what the profile looks like if there's not uploaded videos.

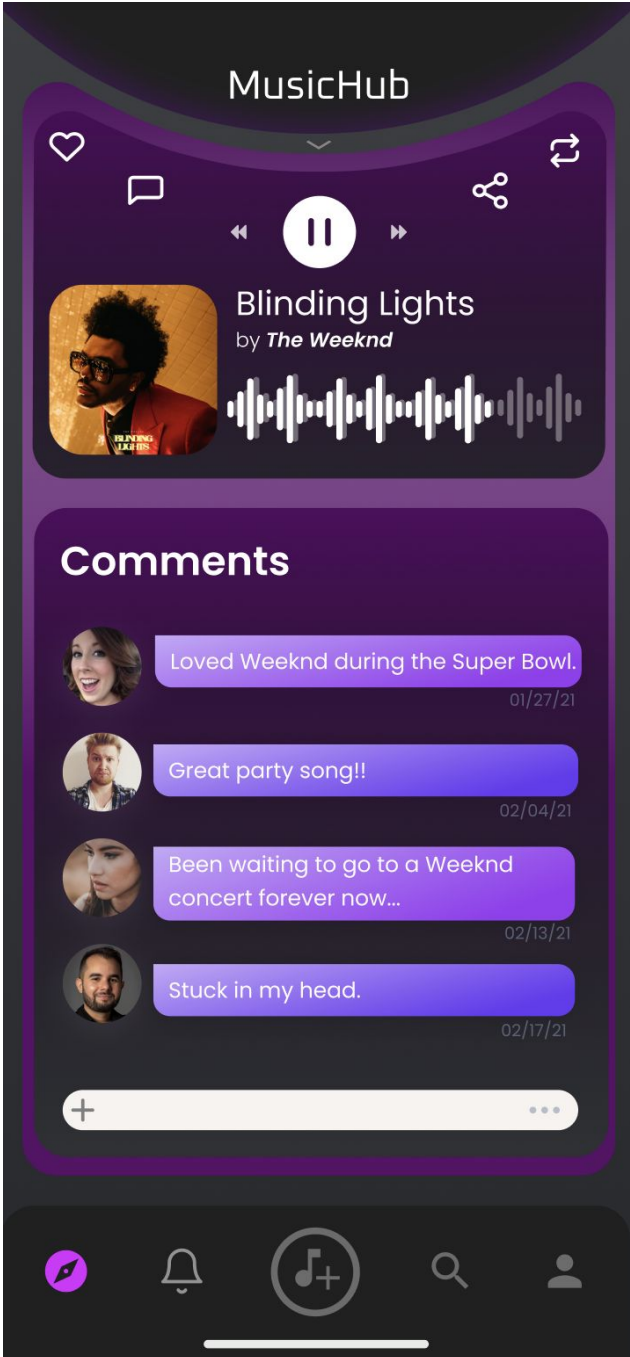
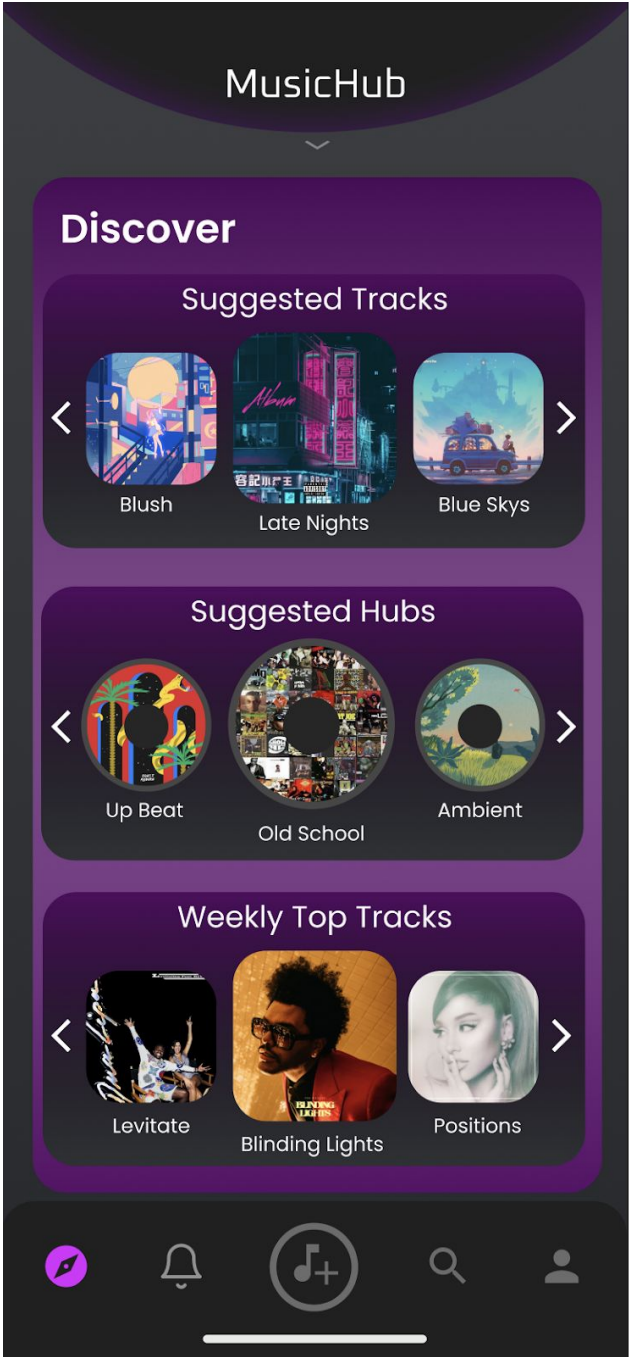
High Fidelity Prototypes

Mobile Mockup: Hub Chat Room      Created By Arjun Tyagi

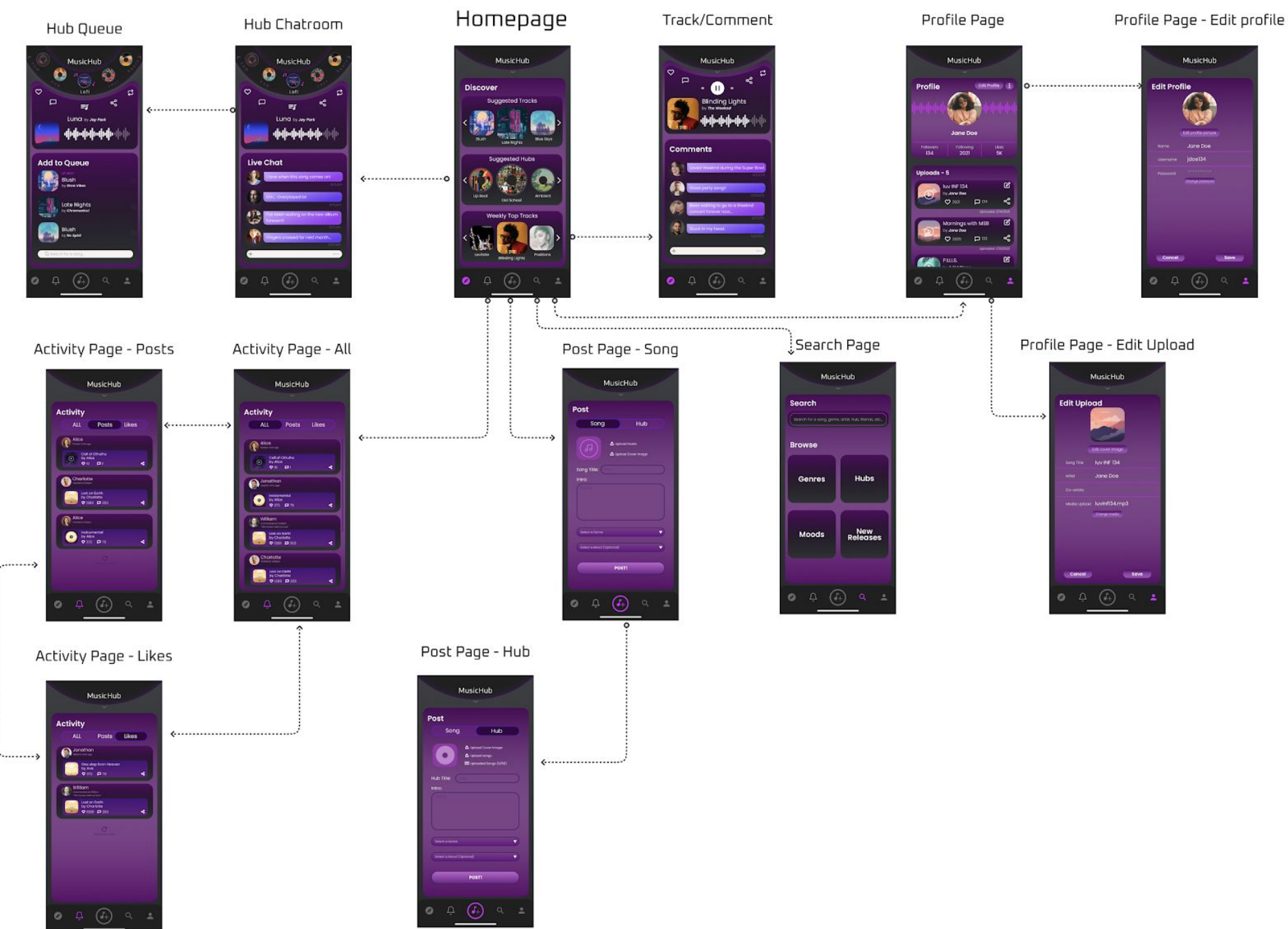


Mobile Mockup:Discover Pages

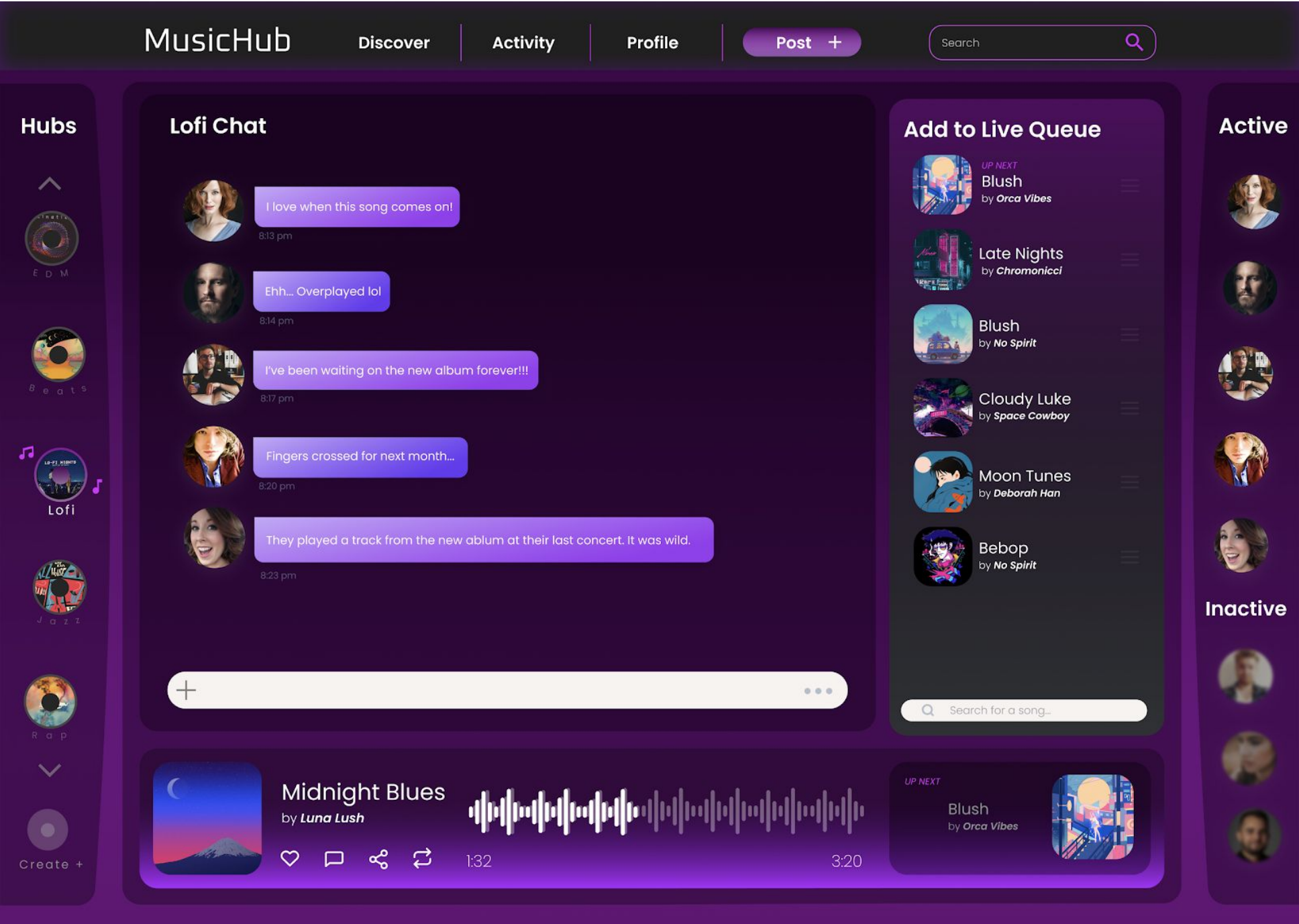
Created By Arjun Tyagi



# User Flow Diagram (Mobile)



# Web Mockup: Hub Chat Page Created By Arjun Tyagi



Web Mockup:Discover Page Created By Arjun Tyagi

MusicHub

Discover

Activity

Profile

Post +

Search

Hubs

EDM

Beats

Lofi

Jazz

Rap

Create +

Discover

Suggested Tracks

Bebop

Levitate

Blinding Lights

Positions

Moon Tunes

Suggested Hubs

Metal

Up Beat

Old School

Ambient

Rock

Weekly Top Tracks

Go Crazy

Levitate

Blinding Lights

Positions

Holy

Blinding Lights

by Luna Lush

1:32

3:20

Blinding Lights

by Luna Lush

1:32

3:20

Active

Inactive

# User Flow Diagram (Web)

Hub Chatroom



Homepage



Activity Page - All



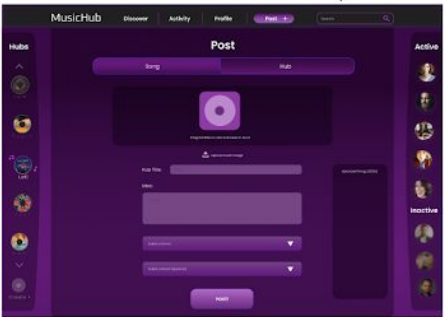
Profile Page



Post Page - Song



Post Page - Hub



Activity Page - Likes



Activity Page - Posts



# Functional Prototypes

## Overview of Functional Prototype for **Mobile**:

[Link to live prototype for MusicHub Mobile version](#)

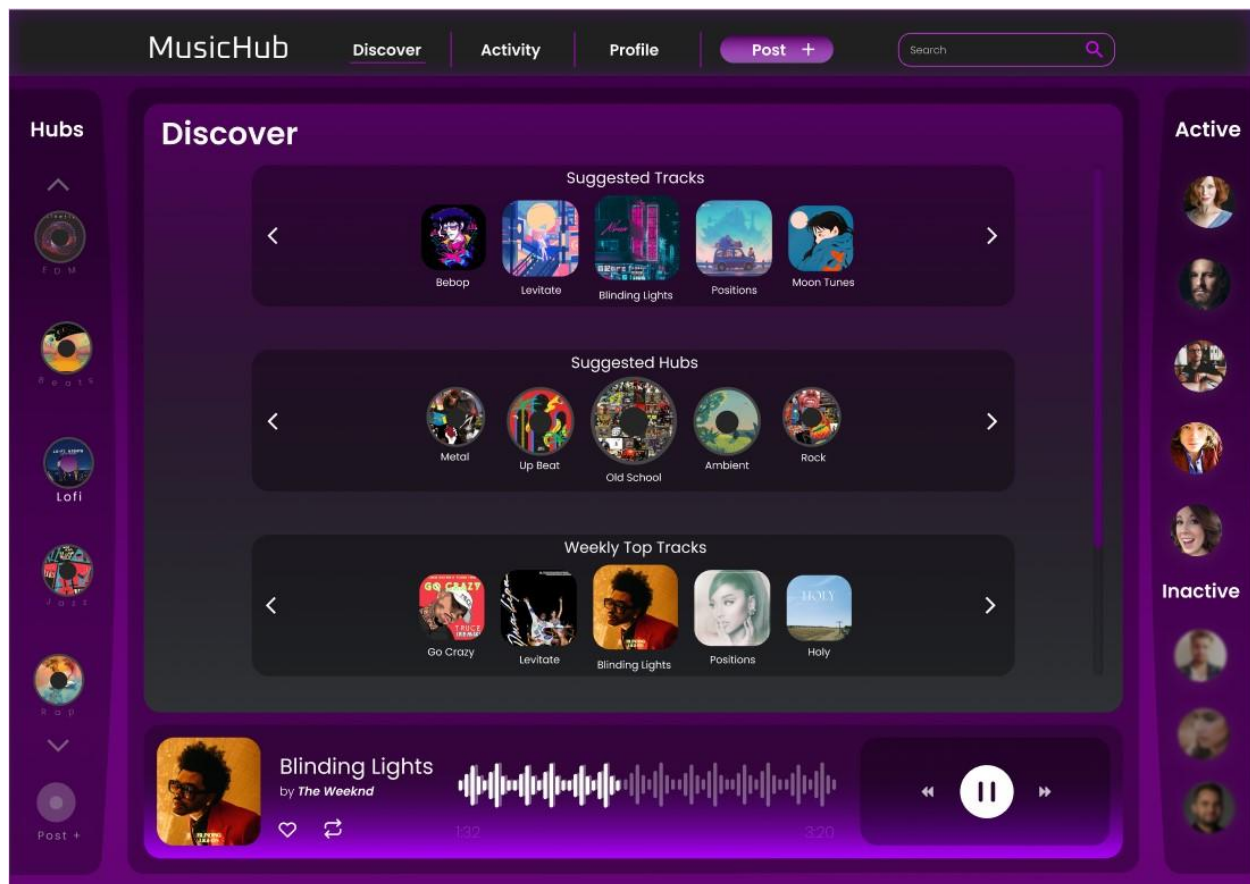


This is the Hub chatroom and the discover page for the mobile version of MusicHub. The Hub chatroom page can be found by selecting and joining a hub using the hub scroll wheel at the top of the application or by selecting a hub within the Discover page. Within a hub, a user has access to see what song is currently

playing in the hub, as well as the ability to like, repost, and see the queue for the hub. In the chatroom within the Lofi hub, users can write comments and chat with other people in the hub about the song or music playing. In the Discover page, users can browse through tracks or hubs.

# Overview of Functional Prototype for Web:

[Link to live prototype for MusicHub Web version](#)



This is the homepage for MusicHub on the web version. The homepage consists of the Discover page which is where users can find and discover tracks and hubs. While the core of this page focuses on the "discover" features, due to the web version having more real estate to add features, it also includes a music controller at the bottom which shows what song is currently playing. On the left is a hub wheel that users can browse through to find and enter hubs. On the left includes a friends list that shows any active or inactive friends.

# Usability Testing

## Test Plan

### Participant Demographics:

| Participant | Age | Experience   | Preferred Platform              | Recruiter | Date/Time      |
|-------------|-----|--------------|---------------------------------|-----------|----------------|
| P1          | 22  | Intermediate | iOS, Google Chrome, MacOS       | Bryan     | 3/10/21 9:00pm |
| P2          | 23  | Beginner     | Android, Google Chrome, Windows | Bryan     | 3/10/21 7:30pm |
| P3          | 50  | Intermediate | iOS, MacOS, Chrome              | Arjun     | 3/11/21 8:00pm |
| P4          | 27  | Beginner     | iOS, MacOS, Windows             | Ziyu      | 3/12/21 3:00pm |

### Tasks:

#### Task 1:

Description: The hub chat room shows the current hub you're in at the top as well as the current song that is playing in the hub. For this task, like and repost the currently playing song.

Goal: User should tap the heart icon and the repost icon in the top corners.

#### Task 2:

Description: For this task, change to another hub.

Goal: User clicks on another hub disk from the dial selector on the top of the screen.

Task 3:

Description: For this task, find the queue for the hub you're currently in and change the order of the play queue.

Goal: User should click on the queue button and drag one of the songs to change the play order.

Task 4:

Description: The activity page is used to track friends' activities like their comments, likes, reposts and posts. For this task, try to comment on a song that a friend shared on the activity page.

Goal: User should find a commented song and tap on the comment icon.

Task 5:

Description: The Post page is used to post new songs or hubs. For this task, try to post a hub.

Goal: User should tap "Hub", upload songs and the cover image, select a genre and a mood, and post the hub.

Task 6:

Description: The search page is used to search for songs either by manual input or by categories. For this task, browse for songs that have been released recently.

Goal: User should click on "New Releases" category and find a list of songs.

Task 7:

Description: The profile page is for viewing your own profile and finding information such as how many followers you have and what songs you have uploaded/posted. For this task, find out how to share your profile to a friend.

Goal: User should navigate to the menu (3-dot button) to find the share profile button and click on it.

# Data Collection

Participant: P1

| Task | Task completion results | Errors | Time per task | Notes from user reflection                                                                  |
|------|-------------------------|--------|---------------|---------------------------------------------------------------------------------------------|
| 1    | Completed               | 0      | 10 seconds    | Where does the like get stored, where does reporting go? Is my like public or private?      |
| 2    | Completed               | 0      | 5 seconds     | Likes the navigation circle at the top.                                                     |
| 3    | Completed               | 3      | 15 seconds    | The three lines were not that visible. Tried clicking on the song images instead.           |
| 4    | Completed               | 3      | 10 seconds    | The hitbox is tiny and couldn't be clicked easily.                                          |
| 5    | Completed               | 0      | 10 seconds    | Didn't click on the upload buttons but proceeded to click on the Post button at the bottom. |
| 6    | Completed               | 3      | 20 seconds    | Clicked on the search button instead.                                                       |
| 7    | Completed               | 0      | 10 seconds    | Easily found it because they were familiar with the UI of having a menu and a share         |

|  |  |  |  |                     |
|--|--|--|--|---------------------|
|  |  |  |  | button in the menu. |
|--|--|--|--|---------------------|

## Participant: P2

| Task | Task completion results | Errors | Time per task | Notes from user reflection                                                                                                                                                                                  |
|------|-------------------------|--------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Completed               | 1      | 25 seconds    | "Like" was super fast but repost took a little time to find.                                                                                                                                                |
| 2    | Completed               | 2      | 20 seconds    | Tried clicking on the arrow at first                                                                                                                                                                        |
| 3    | Completed               | 4      | 40 seconds    | Finding the queue took a little time, but it was confusing that you had to drag the queue to change the order, but they said it made sense for it to do that if it was done on an actual mobile device.     |
| 4    | Completed               | 0      | 15 seconds    | Very straight-forward                                                                                                                                                                                       |
| 5    | Completed               | 2      | 2.5 minutes   | Because not everything is implemented, it was confusing when some things couldn't be clicked on. Wasn't really sure if they were doing it correctly as there wasn't any feedback if things were selected or |

|   |           |   |             |                                                                                                                                   |
|---|-----------|---|-------------|-----------------------------------------------------------------------------------------------------------------------------------|
|   |           |   |             | not.                                                                                                                              |
| 6 | Completed | 0 | 15 seconds  | Very simple and easy to find.                                                                                                     |
| 7 | Completed | 5 | 1.5 minutes | Took some time to find where to share. Made some clicking mistakes by clicking on edit profile and the share button on the songs. |

### Participant: P3

| Task | Task completion results | Errors | Time per task | Notes from user reflection                                                                                                                                                           |
|------|-------------------------|--------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Completed               | 1      | 14.62 seconds | Got confused by the share and repost buttons. Suggested to keep the buttons far apart to better differentiate between them.                                                          |
| 2    | Completed               | 0      | 8.39 seconds  | User clicked on the disk to the right and had no issues switching hubs.                                                                                                              |
| 3    | Completed               | 1      | 23.27 seconds | Took the user some time to figure out how to access the queue. From the queue screen user tried to drag the title down. Took the user some time to drag the bar icon to successfully |

|   |           |   |               |                                                                                                                                                                                                                                                                                    |
|---|-----------|---|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |           |   |               | change the order.                                                                                                                                                                                                                                                                  |
| 4 | Completed | 0 | 15.92 seconds | Tried switching between tabs first but then successfully clicked on the comment icon. Suggested making the buttons bigger.                                                                                                                                                         |
| 5 | Completed | 3 | 1.02 Minutes  | User successfully changed over to the hub tab to post but struggled with the interactive elements. User was trying to click on the album/song images to upload and did not click the upload button. User was also confused between the 'upload song' and 'uploaded songs' buttons. |
| 6 | Completed | 0 | 10.23 seconds | User had no problems finding the new releases section on the search page.                                                                                                                                                                                                          |
| 7 | Completed | 1 | 23.15 seconds | User clicked on the edit profile button first but eventually clicked the three dots icon. Suggested that there just be a direct share button on the profile card.                                                                                                                  |

## Participant: P4

| Task | Task completion results | Errors | Time per task | Notes from user reflection                                                                                                               |
|------|-------------------------|--------|---------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Completed               | 0      | 9 seconds     | Find the "like" button immediately, but take several seconds to find the "repost" button.                                                |
| 2    | Completed               | 1      | 19 seconds    | Hesitate for a while to find the dial selector. Click the buttons at the bottom first                                                    |
| 3    | Completed               | 2      | 20 seconds    | Take awhile to find the queue bar. Drag the title of songs first, and then find the icon to drag with                                    |
| 4    | Completed               | 0      | 10 seconds    | Hesitate for a while to make sure all the songs are shared by friends. Find the comment button immediately.                              |
| 5    | Completed               | 0      | 27 seconds    | Find the "Hub" and do the rest of the tasks in a short time period. Hesitate when finding out the uploading function is not implemented. |

|   |           |   |            |                                                                                                                                  |
|---|-----------|---|------------|----------------------------------------------------------------------------------------------------------------------------------|
| 6 | Completed | 2 | 10 seconds | Users easily find out the "New Releases" category.                                                                               |
| 7 | Completed | 3 | 33 seconds | The user clicks every single button in the profile page, and finally clicks the 3-dot button and finds the share profile button. |

## Study Analysis

### Quantitative Results

| Task   | Total Time Per Task | Average Time Per Task / # Participants |
|--------|---------------------|----------------------------------------|
| Task 1 | 58.6 seconds        | 14.65 seconds                          |
| Task 2 | 52.36 seconds       | 13.09 seconds                          |
| Task 3 | 98.24 seconds       | 24.56 seconds                          |
| Task 4 | 50.92 seconds       | 12.73 seconds                          |
| Task 5 | 187 seconds         | 46.75 seconds                          |
| Task 6 | 55.24 seconds       | 13.81 seconds                          |
| Task 7 | 169.44 seconds      | 42.36 seconds                          |

| Task completion rate per user | # of success / total # of tasks |
|-------------------------------|---------------------------------|
| P1                            | 100%                            |

|    |      |
|----|------|
| P2 | 100% |
| P3 | 100% |
| P4 | 100% |

| Task   | Total # of Errors / # of participants |
|--------|---------------------------------------|
| Task 1 | 2                                     |
| Task 2 | 3                                     |
| Task 3 | 10                                    |
| Task 4 | 3                                     |
| Task 5 | 5                                     |
| Task 6 | 5                                     |
| Task 7 | 9                                     |

## Qualitative Results

Observation notes and reflections with each participant have been recorded under the data collection section for each participant's table. After carefully aggregating and processing this data our team was able to develop insights about common pain points in our interface where participants were generally confused. In our first task where users were required to like and repost the song, we found that many of the participants found the share and repost buttons to be confusing. With such similar functionality one participant commented about keeping the two buttons further apart in order to make them more clear. Alternatively, some users also found that the like and repost functionalities were ambiguous and that they required more feedback about where they were liking or reposting to.

In task 3, two participants also got stuck on changing the queue order because they were trying to drag either the title or album art instead of the dedicated button. We found that for

ease of use the whole element should have been draggable. Finally, one particular area where participants struggled was the post page in task 5 for creating a new Hub. Since the Figma prototype interactions were not perfect, many participants struggled with the lack of feedback and assumed they were doing something wrong when selecting the album art and tracks. Additionally, users were getting confused between the "Upload Song" and "Uploaded Songs" sections and believed both could just be merged into one in order to avoid confusion.

As a result of our data collection and heuristic evaluation we have decided to make the following changes:

- Keep the share and repost buttons far apart in order to avoid confusion between similar functionalities
- Allow users to drag anywhere on the song bar in order to change the queue order. A dedicated drag button was too restrictive.
- Provide better user feedback across the application but also specifically when selecting album art and tracks for the post page. Users should easily know that they have successfully entered all the information to create the hub.
- Remove redundant wording from buttons, and merge similar functionality to eliminate extra clicks.  
ex. "Upload Song" and "Uploaded Songs"