

# Harmony

## Sprint 1 Planning Document

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### **Sprint Overview**

During this Sprint we hope to establish the foundations for our application. Making sure some of the core components and features are implemented, thus ensuring that we won't encounter structural issues in future Sprints. Some of the core components we will be working on are establishing the Database with Firestore, and establishing a template for the UI and the Spotify API connection. Additionally, we are going to start implementing some simple User features such as friend requests and the settings page.

Scrum Master: Thomas Hynes

Meeting Plan: Sunday 2:00pm & Tuesday 2:00pm

### **Risks and Challenges:**

Because this is the first sprint of our project, we may encounter more obstacles here than at any other point during this semester. Although our group has had a few weeks to communicate with each other, we have not worked on anything technical and it may take

some time for all of us to be cohesive. We may need to put in extra time outside of the required sprint meetings to discuss how we plan to execute some stories in this sprint just so we are all on the same page. We believe this challenge will not be something that is long term and we hope to be careful and accurate in the basics of our application so it will be easy to build upon in the future.

## Current Sprint Detail

### User story #1

As a user, I would like to be able to register for a Harmony account.

#	Description	Estimated Time	Owner
1	Connect Firebase and Firestore to Flutter App	2 Hrs	Aleksei N.
2	Connect Firebase Authentication to Flutter App	1 hr	Aleksei N.
3	Add Registration UI	2 hr	Aleksei N.
4	Register User through Firebase Authentication	2 hr	Aleksei N.
5	Add user object to Firestore according to their newly created UID (User ID)	2 hr	Aleksei N

### Acceptance Criteria

- Given that Firebase and Firestore are connected to the app, the app will be able to make queries for Firestore to send and retrieve data. When they are connected, app will be set up for basic server communication.

- Given that Firebase Authentication is connected to Flutter App, the user will be able to login, signup, and reset email/password.
- Given that Registration UI is complete, the user will be able to enter email, username, password, name and submit that data.
- Given that user clicks Sign Up on Registration screen, the app will send a query to Firebase Authentication to create a new account.
- Given that account was created successfully in Firebase Authentication, a new user object will be created in Firestore with a UID returned from Firebase Authentication.

## User story #2

As a user, I would like to be able to sync with my Spotify account

#	Description	Estimated Time	Owner
1	Create a prompt on the users profile to send them to sign into their spotify account	6 hr	Thomas
2	Get and store that account data from Spotify API and associate it with the User	5 hr	Thomas
3	Handle failed attempt returns from the Spotify API	3 hr	Thomas
4	Testing and Debugging	5 hr	Thomas

## Acceptance Criteria

- Given the Spotify API is implemented correctly. When I submit correct Spotify account information. Then that account will be linked to my user in the database
- Given the API returns are handled correctly. When I submit incorrect Spotify Information. Then nothing will be stored and linked to my user in the database.
- Given the API returns are handled correctly. When I do not complete the account linking process. Then nothing will be stored and linked to my user in the database.
- Given the account information is correctly stored and linked. When I request for Spotify Data. Then the correct data will be returned.

## User story #3

As a user, I would like to be able to unsync with my Spotify account.

#	Description	Estimated Time	Owner
1	Create an option for the user to unsync their spotify account	5 hr	Thomas
2	Clear their account data and link from the database	3 hr	Thomas
3	Testing and Debugging	3 hr	Thomas

## Acceptance Criteria

- Given the UI is created. When the User opens their settings. Then there will be an option to unsync their spotify account

- Given the function is implemented correctly. When the User selects and confirms the unsync option. Then their Spotify account data and link to their User will be removed.
- Given the function is implemented correctly. When the User selects but does not confirm the unsync option. Then their Spotify account data and link to their User will not be removed.

### User story #5

As a user, I would like to be able to log in so that I can access my account and communicate publicly with a recognizable name.

#	Description	Estimated Time	Owner
1	Create an introductory page with the option to login or create an account	3 hrs	Pratham
2	Add a button in the introductory page that allows user to navigate to a login page that allows them to enter their credentials	1 hrs	Pratham
3	Establish communication with database so we can check if the username/password is correct	3 hrs	Pratham
4	Create a back button for the login page if the user changes their mind and wants to go back to the introductory page	2 hr	Pratham
5	Handle wrong username/password and homepage navigation if the username/password is correct	3 hrs	Pratham

6	Retrieve user object data from Firestore after they successfully login	2 hr	Aleksei N
7	Testing/Debugging	4 hrs	Pratham

## Acceptance Criteria

- Given the introductory page has been created properly, when the user opens the application then they will be greeted with an option to navigate to the login page
- Given the 'User Login' button has been created in the introductory page when the user clicks this button then they will be able to open the login page
- Given the back button has been created in the login page when the user clicks this button they will be sent back to the introductory page
- Given the login page has been navigated to, when the login page opens then the user will be given two text fields to enter their username and password and a submit button to verify login
- Given the user has entered their username and password correctly, when the user presses the submit button, then they will be navigated to their homepage
- Given the user has correctly entered their username and password correctly, their user data will be retrieved from Firestore
- Given the user has entered their username and password incorrectly, when the user presses the submit button, then they will be prompted by the application to enter a valid username and password

## User story #6

As a user, I would like to be able to edit my name within the profile settings.

#	Description	Estimated Time	Owner
1	Create a profile settings page with an edit button and a save button that appears in place of the edit button when edit button is pressed	2 Hrs	Alex R
2	Add a name text box that is loaded with database's version of username and becomes editable when edit button is pressed	2 Hrs	Alex R
3	Create an algorithm to save the user's name information in the database	3 Hrs	Alex R
4	Create unit tests for algorithm	2 Hrs	Alex R

## Acceptance Criteria

- Given that the profile settings page is created properly, when a user clicks on the profile settings button on the home page they will see the settings page.
- Given that the name text box was set up correctly, if and only if a user presses the edit button they will be able to change the text.
- Given that the algorithm is correct, when a user tries to save changes to their username that aren't between (inclusive) 5 and 15 characters the save will fail and they'll receive a see error.

- Given that the algorithm is correct, when a user tries to save changes to their username that doesn't contain only alphanumeric characters or periods the save will fail and they'll see a related error.
- Given that the algorithm is correct, when a user tries to save changes to their username and it already exists the save will fail and they'll receive a related error.
- Given that the algorithm is correct, when a user successfully saves changes to their username the new name will appear throughout the app.

### User story #7

As a user, I would like to be able to change my profile picture within the profile settings (with certain preset images to choose from)

#	Description	Estimated Time	Owner
1	Add a plane displaying user's current profile picture or their name if no picture available in profile settings	2 Hrs	Alex R
2	After edit button is pressed make the plane a widget allowing the user to upload a picture	3 Hrs	Alex R
3	Create an algorithm to save the user's profile picture in the database	3 Hrs	Alex R
4	Create unit tests for algorithm	2 Hrs	Alex R



## Acceptance Criteria

- Given that the profile picture field was set up correctly, if and only if a user presses the edit button they will be able to change the picture.
- Given that the algorithm is correct, when a user uploads a .png, .jpeg, or .HEIC file greater than or equal to 8 MB in size and clicks save, the save will fail and the user will see a related error.
- Given that the algorithm is correct, when a user uploads a .png, .jpeg, or .HEIC file less than 8 MB in size and clicks save, the save will succeed and the new picture will appear throughout the app.

## User story #8

As a user, I would like to be able to change my email/password within the profile settings.

#	Description	Estimated Time	Owner
1	Add text fields that become editable when edit button is pressed for both email and password and are synced with database	2 Hrs	Alex R
2	Send an email confirmation when email/password is edited	4 Hrs	Alex R
3	Create an algorithm to save the user's email/password in the database when confirmed	3 Hrs	Alex R
4	Create unit tests for algorithm	2 Hrs	Alex R

## Acceptance Criteria

- Given that the text fields were set up correctly, if and only if a user presses the edit button they will be able to change them.
- Given that the algorithm is correct, when a user changes their email and it isn't the correct email format, their save will fail and they will see a related error.
- Given that the algorithm is correct, when a user changes their password and it isn't between 8 and 26 characters (inclusive) with at least one number and special character, their save will fail and they will see a related error.
- Given that the email algorithm is correct, when a user successfully edited and saved their username or password, they will receive an email confirmation.
- Given that the algorithm is correct, when a user confirms an email confirmation, they will see a success page and the changes implemented in the app.

## User story #9

As a user, I would like to be able to use my email to recover my password if I forget it.

#	Description	Estimated Time	Owner
1	Add a button in the login page to navigate to the forget password page	2 hr	Pratham
2	Add a back button in the forgot password page	2 hr	Pratham
3	Add a text field for the user to enter their email and button to send request	2 hr	Pratham
4	Create an algorithm to check if email exists in the database	2 hrs	Pratham

5	Create an algorithm to send the email to recover one's password and notify user if the email is not found	2 hrs	Pratham
6	Testing/Debugging	4 hrs	Pratham

## Acceptance Criteria

- Given the user has forgotten his/her password when they click the button labelled 'Forgot Password?' then they will be navigated to the forgot password page
- Given the user is on the forgot password page when they click the back button, then they will be taken back to the login page
- Given the email entered is correct when the forget password request is sent, then the application will send an email to that address with the password
- Given the email entered is incorrect when the forget password button is clicked, then the program will recognize the email address does not exist in the database and notify the user to enter a new password

## User story #12

As a user, I would like to be able to access a list of my friends.

#	Description	Estimated Time	Owner
1	Create a UI for viewing the list of friends.	4 Hrs	Michael C.
2	Retrieve friend list information from the database.	5 Hrs	Michael C.
3	Make friends profiles accessible from the friends	5 Hrs	Michael C.

	list		
4	Testing and Debugging.	8 Hrs	Michael C.

### Acceptance Criteria

- Given that the UI is implemented correctly when the User accesses their friends list, the user should be presented with a list of all their friends
- Given that the profiles are implemented correctly when the User clicks their friends, they should be taken to their friend's profile.
- Given that the database connection is implemented correctly when the User accesses their friends list, they should see the most recent state of their friends list.

### User story #15

As a user, I would like to be able to send friend requests to other users.

#	Description	Estimated Time	Owner
1	Create a UI page for sending and receiving friend requests.	4 Hrs	Michael C.
2	Search for Users using their username as reference.	5 Hrs	Aleksei N.
3	Send friend requests from the User to another designated user.	4 Hrs	Michael C.
4	Testing and Debugging.	3 Hrs	Aleksei N.

## Acceptance Criteria

- Given that the page for searching friends is implemented, the user can search and scroll through found users.
- Given that the database connection is implemented correctly when the User searches for other users, they should be presented with all other users that match the search criteria.
- Given that the database connection is implemented correctly when the User sends a friend request, then the other user should receive the request.

## User story #16

As a user, I would like to be able to unfriend people or deny friend requests.

#	Description	Estimated Time	Owner
1	Create UI options for accepting or denying a friend request.	2 Hrs	Aleksei N.
2	Add or ignore a friend into the friend list depending on User's input.	3 Hrs	Aleksei N
3	Users should be able to remove a current friend from their friends list.	2 Hrs	Aleksei N.
4	Testing and Debugging	4 Hrs	Aleksei N.

## Acceptance Criteria

- Given that the database connection is implemented correctly, when the User unfriends another user, the removed user should be removed from their friends list.
- Given that the UI is implemented correctly when a User removes a friend then their friend list should reflect this in real-time.
- Given that requests are implemented correctly when the User denies a friend request then neither user should appear as friends.

## Backlog

(Stories in red are either in the current sprint or already implemented):

1. As a user, I would like to be able to register for a Harmony account
2. As a user, I would like to be able to sync with my Spotify account
3. As a user, I would like to be able to unsync with my Spotify account
4. As a user, I would like to see an analytics page for the music I listen to
5. As a user, I would like to be able to log in so that I can access my account and communicate publicly with a recognizable name
6. As a user, I would like to be able to edit my name within the profile settings
7. As a user, I would like to be able to change my profile picture within the profile settings (with certain preset images to choose from)
8. As a user, I would like to be able to change my email/password within the profile settings
9. As a user, I would like to be able to use my email to recover my password if I forget it.

10. As a user, I would like to see my friend's profile information such as their profile picture, recent songs, and favourite genres
11. As a user, I would like to see suggestions for people to befriend in Harmony
12. As a user, I would like to be able to access a list of my friends
13. As a user, I would like to be able to see songs that my friends and I listen to
14. As a user, I would like to have an autogenerated playlist based on songs that my friends and I listen to
15. As a user, I would like to be able to send friend requests to other users
16. As a user, I would like to be able to unfriend people or deny friend requests
17. As a user, I would like to be able to block people from seeing my account or contacting me
18. As a user, I would like to receive a notification when someone sends me a friend request
19. As a user, I would like to receive a notification when someone accepts my friend request
20. As a user, I would like to be able to download the app onto my Android phone
21. As a user, I would like to be able to download the app onto my Apple phone
22. As a user, I would like to be able to adjust my notification settings to allow/not allow for certain or all alerts
23. As a user, I would like to be able to receive messages from my friends within the app
24. As a user, I would like to be able to send messages to my friends within the app
25. As a user, I would like to receive notifications when I receive a message
26. As a user, I would like to be able to provide feedback on the app to the developers
27. As a user, I would like to report bugs to the developers in the app
28. As a user, I would like to be able to share a playlist with my friend through the app

29. As a user, I would like to be able to share an album with my friend through the app
30. As a user, I would like to be able to share an artist/band with my friend through the app
31. As a user, I would like to be able to share a song with my friend through the app
32. As a user, I would like to be able to share a snapshot of my profile on other social media platforms
33. As a user, I would like to be able to set my location for time zone purposes
34. As a user, I would like to be able to publicly rate a song
35. As a user, I would like to be able to publicly rate an album
36. As a user, I would like to be able to publicly rate an artist/band
37. As a user, I would like to receive recommendations on possible songs I would like based on my own tastes and my friend's taste
38. As a user, I would like to receive recommendations on new artists I may not be aware of
39. As a user, I would like to participate in a daily activity
40. As a user, I would like the daily activity to happen at a spontaneous moment of the day
41. As a user, I would like the daily activity to disappear after 24 hours
42. As a user, I would like to have a private history of my own submissions for the daily activity
43. As a user, I would like to see my friend's results from their daily activity
44. As a user, I would like to respond to my friend's results from the daily activity
45. As a user, I would like to receive a notification when it is time to participate in the daily activity