

HouseMusic

CMPT 276 Group Project

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<https://github.com/Chris-Horan/HOUSEMUSIC>

<https://housemusic276.herokuapp.com/>

****Admin Credentials: Username: "admin", Password: "password"****

Color Codes: 0th Iteration, 1st Iteration, 2nd Iteration, 3rd Iteration

Velocity: Scale of 1 - 3

Documentation Compiled by - Harry Preet Singh

House Music

Requirements and Specification Document

07/23/2020, Version 4

Abstract

HouseMusic is a webapp that allows users to record and loop their own recordings to make a short music sample. Our application will be lightweight and portable to allow for quick and easy editing, but is free for all users. Although the main scope of the project is to create music loops, some other features include real-time collaboration, saving your project adding clips from your device, recording your own voice, and exporting as an mp3. Our app also features user login support, which allows the users to save and load their music projects.

Customer

The target audience will be those who are interested in creating their own music but don't have experience working with recording software. This app is a mix of both entertainment and education. While anybody of any skill level can log in and create music in seconds, more experienced music creators can also use this app to create music loops to use in projects. With this app multiple users can quickly make a short sample of their idea before committing to a full project if they so desire to.

Competitive Analysis

Although other similar applications such as exist, they do not allow for real-time collaboration between users, while ours does. Examples:

Splice Beatmaker (<https://splice.com/sounds/beatmaker>)

Splice Features :

- Easily search and download millions of loops, one-shots, and presets. Drag and drop them into your DAW.
- Exclusive artist packs
- 100% royalty free
- Individual samples

We believe that the scope of this project is appropriate, as it incorporates multiple APIs, includes socket.io real-time functionality, implements a browser based login system, and has at least as many epics as people in our group. We also believe that the amount of work required in this proposal is enough for five group members. We intend to use **Howler.js API** to implement our basic audio features (<https://howlerjs.com/>).

User Stories

1. User Sign Up:

Actors: User

Triggers/Preconditions: A user has requested the signup page for the app and comes across the signup interface

Action/Postconditions : The code will take a username and password from the user and send it to our database. If the username is different from every other username then, it will return the home page of the new user. It will also have a confirmation field for password that will confirm the given password.

Acceptance test :

- Attempt to create a unique user. Check that the new user is added to the user database
 - Test** - If the database already has username named Chris, if we try to add Chris again, the result will be "Username already exist"
- Attempt to create a redundant user. Check that the entry is rejected and that the user is informed.
- Attempt to create a user without satisfying requirements. Check that the entry is rejected and that the user is informed.
 - Test** - Username of length(4,20), so if you try to test username like "cmp"
Results : "Username should be of length 4 to 20".

Iteration: 1

Velocity: 3

2. Admin/User Login:

Actors: Admin or User

2

Triggers/Preconditions): An admin or existing user would like to log in to the application.

Action/Postconditions: The existing user or admin enters their credentials correctly and submits the login form. They are then taken to the homepage for their profile.

Acceptance test :

a. Attempt login with accurate credentials. Check that the login is accepted.

i. **Test** - Search the database if the username exists.

ii. **Result** - If a user exists, direct the user to the main app or if the admin exists, direct the admin to the admin panel.

iii. **Test Values:**

1. Admin:

a. Username: admin

b. Password: password

2. User:

a. Username: test (assumed already exists)

b. Password: 123456 (assumed already exists)

b. Attempt login with inaccurate credentials. Check that the login is not accepted and inform the user.

i. **Test** - Search the database if the username exists.

ii. **Result** - if not it will not give the access to either of the pages.

1. Username: aoioiajefjoisfj (assumed to not be valid)

2. Password: 89u28913123

Iteration: 1

Velocity: 3

3. Admin Adds New Admin:

Actors: Admin

Triggers/Preconditions): An admin would like to add a new user with admin capabilities using the admin panel.

Action/Postconditions: The existing admin enters the username, email, and password of the new admin. The new admin is then added to the user database as user type admin.

Acceptance test :

- a. Attempt to create a unique admin. Check that the new admin is added to the user database.

- i. **Test value: username:** 'abcdef' (Username is not taken by any other user)

- Email:** 'abcdef@test.com' (Email is not taken by any other user)

- Password:** 'password'

- Result:** user 'abcdef' added to database as user type admin and the existing admin is notified.

- b. Attempt to create an admin with a previously used username. Check that the entry is rejected and that the existing admin is informed.

- i. **Test value: username:** 'abcdef' (Username is taken by another user)

- Email:** 'abcdefgh@test.com' (Email is not taken by any other user)

- Password:** 'password'

- Result:** user 'abcdef' is not added to the database and the admin is notified that a user with this username already exists.

- c. Attempt to create an admin without satisfying requirements. Check that the entry is rejected and that the existing admin is informed.

- i. **Test values: username:** '??abcdef' (Username is not taken by any other user)

- Email:** 'abcdef@test.com' (Email is not taken by any other user)

- Password:** 'password'

- Result:** user 'abcdef' is not added to the database and the admin is notified that the username does not meet the requirements.

Iteration: 1**Velocity: 1****4. Admin Removes User or Admin:****Actors:** Admin**Triggers/Preconditions):** An admin would like to remove a user or admin.**Action/Postconditions:** The admin enters the username of the user or admin that they would like to remove. The user or admin in question is then deleted from the database.

Acceptance test :

- a. Attempt to remove a valid user/admin. Check that the removal is completed.
 - i. **Test Value: username = 'removable'** (Assumed that this a valid username that hasn't been deleted yet)
 - ii. This user will be deleted from the database, which can be verified by the 'search' feature.
- b. Attempt to remove a non-existent user/admin. Check that the removal was not possible and inform the admin with an error message.
 - i. **Test Value: username = 'fakeusername'** (Assumed that this an invalid username that does not exist)
 - ii. The admin will be notified with an error message saying "User does not Exist" and the database is not modified.
- c. Attempt to remove a user/admin without providing any information at all (ie. leaving the textbox blank). Check that the removal was not possible and give an error message to the admin.
 - i. **Test Value: username = "**
 - ii. The admin will be notified with an error message saying "User does not Exist" and the database is not modified.

Iteration: 1

Velocity: 1

5. Admin Change User Password:

Actors: Admin

Triggers/Preconditions: An admin would like to change a particular user.

Action/Postconditions: The admin enters the username of the user that they want to change the password. The user password is then changed from the database.

Acceptance test :

- a. Attempt to enter the invalid user. Check that the user does not exist and inform the admin.
 - i. **Test value -Username:** password12
Password: changePassword
The result will be "User does not exist", the database is not changed.
- b. Attempt to enter the valid user. Check that the user exists and inform the admin the password is changed for the corresponding user.
 - i. **Test value - Username:** chris

Password: password098765

The result will be “Password changed successfully”, and the database is updated.

Iteration: 1

Velocity: 1

6. Admin Search for User:

Actors: Admin

Triggers/Preconditions): An admin would like to search a particular user by entering the username.

Action/Postconditions: The admin enters the username of the user that they want to search. The email and password of the user will be shown in the search session of the admin panel.

Acceptance test :

a. Attempt to enter the invalid user. Search for that user and return “no results” in the search session.

i. **Test Value:**

-username: ccdef123 (This is a invalid username.)

-The searching result will show the text “No results”.

b. Attempt to enter the valid user. Search for that user and return all information(username, email and password) in a table format in the search session.

i. **Test Value:**

1. - username: chris567 (This is a valid username.)

2. -The searching result will return the username, email and password of this particular user

Iteration: 1

Velocity: 1

Iteration 1 Total Velocity: 10

7. User Toggles an Instrument

Actors: User

Triggers/Preconditions: The user would like to choose an instrument to play and what measure to play it at.

Action/Postconditions: The user clicks on the toggleable buttons that will allow the user to put an instrument sound in the rhythm of the track then it will select a beat or beats on which the instrument can be played.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 2

8. User Plays Loop

Actors: User

Triggers/Preconditions: The user would like to play the track they have generated

Action/Postconditions: The user clicks the play button near the navbar to for the entire track to be played.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 2

9. User Pauses Play

Actors: User

Triggers/Preconditions: The user would like to pause the currently playing track

Action/Postconditions: The user clicks the pause button that will stop the track at the particular measure of beat.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 1

10. User Stop Play

Actors: User

Triggers/Preconditions: The user would like to altogether stop the the track from playing

Action/Postconditions: The user clicks the stop button and will take the seek pointer back to the start of the track to be played again.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 1

11. User Changes BPM

Actors: User

Triggers/Preconditions: The user would like to change how fast the track goes in th app

Action/Postconditions: The user will click on the '+' and '-' icons on below the nav bar to increase and decrease BPM respectively.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 1

12. User Adds/Removes an Instrument

Actors: User

Triggers/Preconditions: The user would like to add more sounds to their track.

Action/Postconditions: The user clicks the add instrument button and upon clicking the will encounter a list of instruments that are provided and which can be added.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 2

13. User Lengthens or Shortens Track by 4 beats

Actors: User

Triggers/Preconditions: The user would like to increase/decrease the length of their track by 4 measures

Action/Postconditions: The user clicks the add/remove column button to do that

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 1

14. User Access Constraints

Actors: User/Admin

Triggers/Preconditions:

1. Admin wants go to their own dashboard and admin panel
2. User wants to go the dashboard without signing up and logging in
3. Users can't register again or login again.

Action/Postconditions: When any kind of user wants to do the above tasks their access will be allowed only on the status of their user account.

Acceptance test : A user who hasn't signed up will not be able to access dashboard, registered users can't login or sign up again, only admin can access admin panel

Iteration: 2

Velocity: 1

15. User/Admin Logout

Actors: User/Admin

Triggers/Preconditions: The user/admin would like to logout from their account

Action/Postconditions: The user clicks the logout button from the navbar to logout. Clears session variables and sends the user back to the home page

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 2

16. App Home Page

Actors: User/Admin

Triggers/Preconditions: The user/admin would like to see the homepage of the app and

see all its features

Action/Postconditions: The app when launched would navigate to the home page and return a static html file that will display different options that the user might be able to do like signup, login, functions of the app etc.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 2

17. User Navigation Bar

Actors: User/Admin

Triggers/Preconditions: The user/admin would like to see the options that they have when they are on different pages on the app

Action/Postconditions: At home page they have the option of login and signup and seeing about while on the dashboard they will have the option to logout. While logged in they can directly go to their dashboard from the homepage
When on the dashboard, they can logout, or explore the details of the app through nav bar.

Acceptance test : Frontend feature, test subjected to user

Iteration: 2

Velocity: 1

Iteration 2 Total Velocity: 16

18. User/Admin Forgets Password

Actors: User/Admin

Triggers/Preconditions: The user/ admin has forgotten their password and would like to recover it.

Action/Postconditions: At the login page, user clicks on the forgot password link and then will be directed to enter their email used at the time of registration. A link will be sent to their email that will allow them to reset their password.

Acceptance test : Forgot password function in test.js

Iteration:3

Velocity: 3

19. User saves a project,

Actors: User

Triggers/Preconditions: The user wants to save a project so that they can work on it in future

Action/Postconditions: At the dashboard page,when the user clicks the save project button, the project will be saved as a table depicting each sound in the cell.

Acceptance test : Save a new track function in test.js

Iteration:3

Velocity: 3

20. User loads a saved project

Actors: User

Triggers/Preconditions: The user wants to load a previously save project

Action/Postconditions: At the dashboard page, the user can click the the save button to add a project to their track list.

Acceptance test : Save a track function in test.js

Iteration:3

Velocity: 3

21. User can view all their saved tracks

Actors: User

Triggers/Preconditions: The user wants to see all of their tracks to play/edit them

Action/Postconditions: At the dashboard page the user can click view my tracks button to see all of their tracks

Acceptance test : Display playlist function in test.js

Iteration:3

Velocity: 2

22. User deletes a project,

Actors: User

Triggers/Preconditions: User wants to delete a project that is currently being played.

Action/Postconditions: User can click on the delete button to delete a specific project.

Acceptance test : Delete a track function in test.js

Iteration:3

Velocity: 1

23. User overwrites a project

Actors: User

Triggers/Preconditions: Th user wants to overwrite some edits on the existing project.

Action/Postconditions: The user can click the overwrite button on the top bar to overwrite theri edits in the same track

Acceptance test : Overwrite function in test.js

Iteration:3

Velocity: 1

24. User generates a shareable code for their project

Actors: User

Triggers/Preconditions: User wants to create a shareable code that will allow them to share their project with another user. The user must save their project first.

Action/Postconditions: User clicks on the share project button to generate the code.

Acceptance test : We generate the code on the screen and check if its right by loading it in another user's dashboard.

Iteration:3

Velocity: 3

25. User loads a project from a shareable code

Actors: User

Triggers/Preconditions: The user has a code which allows them to load a project from

another user.

Action/Postconditions: The user pastes the code to the enter friend code box and hit submit. This will load the project on dashboard

Acceptance test : The project will be loaded onto the dashboard screen.

Iteration:3

Velocity: 2

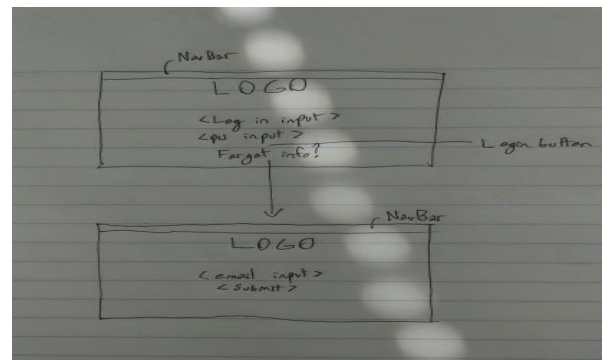
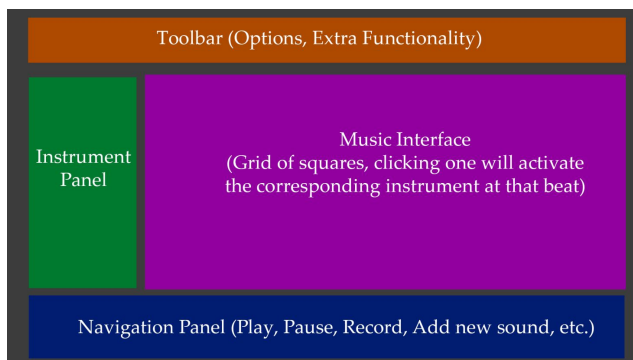
Iteration 3 Total Velocity: 18

Incomplete Features

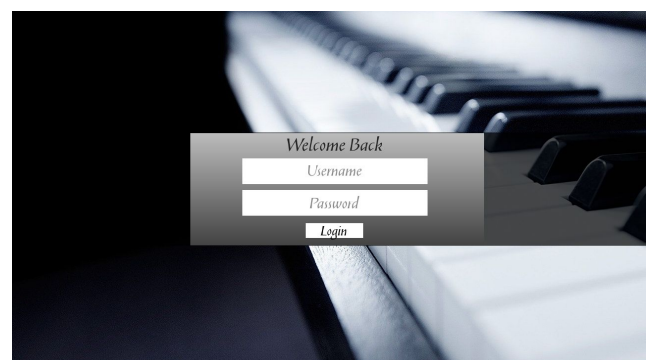
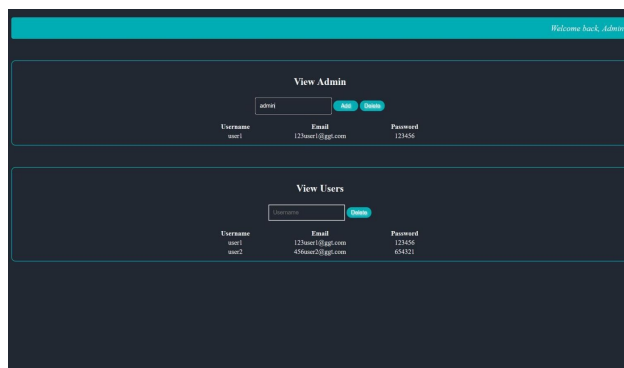
1. User can download track as mp3
2. Users can record their own voice
3. Users can upload their own sounds

User Interface Requirements

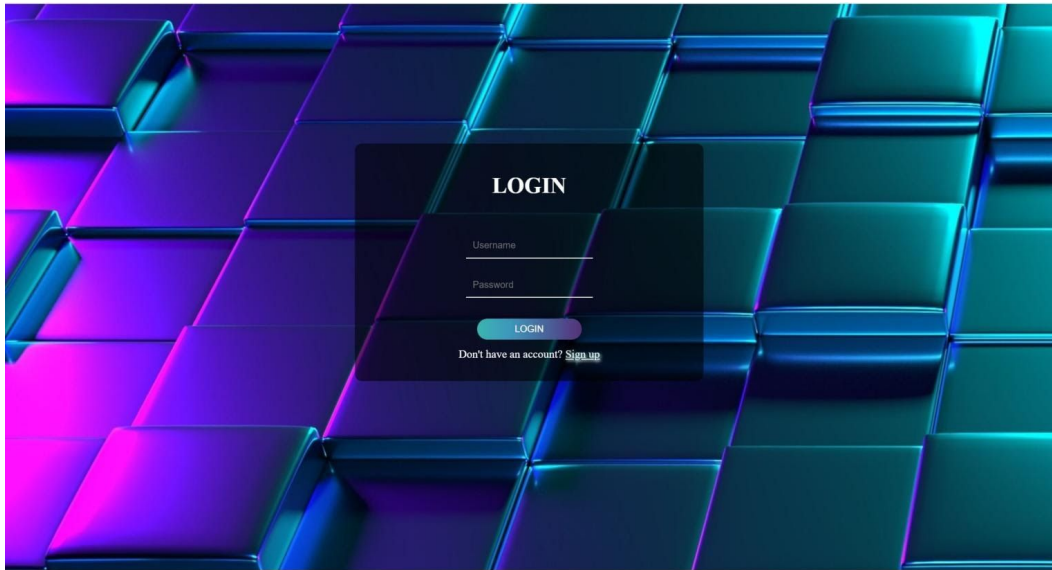
Initial UI Mockups



First and Second Drafts



Final



Second Iteration

