

# My Musical Life

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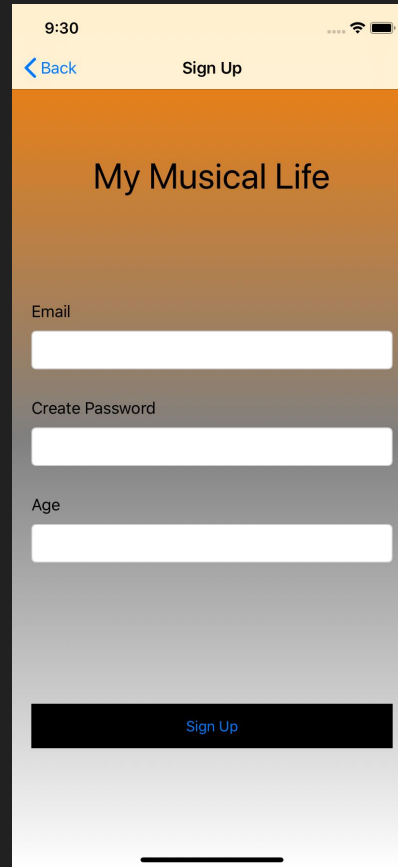
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# Front End

- Login
- Sign Up
- Sensor Data Permissions



9:30

[Back](#) Sign Up

## My Musical Life

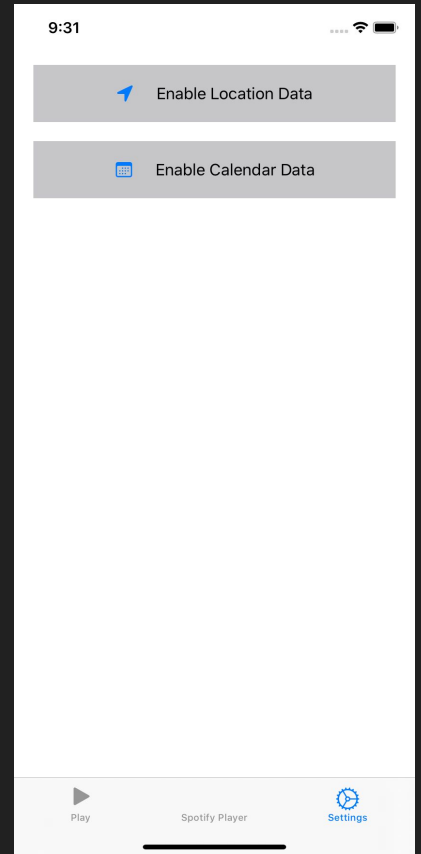
Email

Create Password

Age

Sign Up

This is a mobile app sign-up screen. The top status bar shows the time 9:30, signal strength, Wi-Fi, and battery icons. Below the status bar is a navigation bar with a blue back arrow and the text 'Sign Up'. The main content area has a gradient background from orange to white. It features the title 'My Musical Life' in a large, bold font. Below the title are three input fields: 'Email', 'Create Password', and 'Age'. At the bottom of the form is a black button with the text 'Sign Up' in white.



9:31

Enable Location Data

Enable Calendar Data

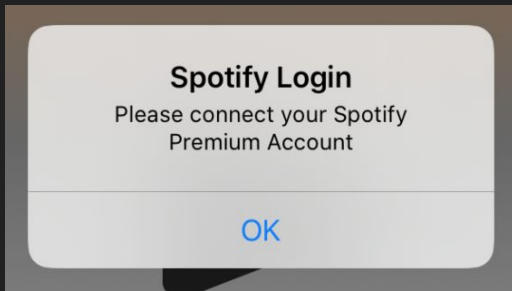
Play Spotify Player Settings

This is a mobile app permissions screen. The top status bar shows the time 9:31, signal strength, Wi-Fi, and battery icons. Below the status bar is a white navigation bar. The main content area is white and contains two grey buttons: 'Enable Location Data' with a blue location pin icon and 'Enable Calendar Data' with a blue calendar icon. At the bottom of the screen is a white navigation bar with three icons: a play button labeled 'Play', a Spotify logo labeled 'Spotify Player', and a gear icon labeled 'Settings'.

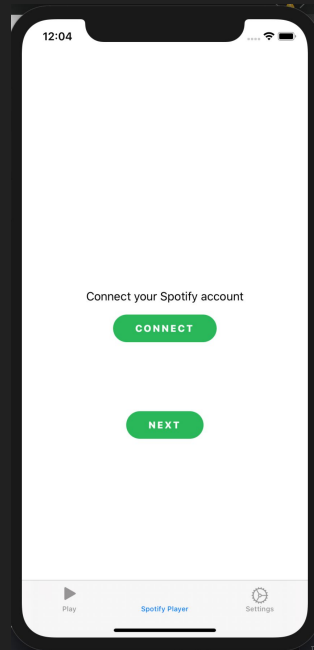
# Front End

- Swift - Spotify SDK integration
  - Spotify login screen
  - Hiding and storing credentials
  - Integrated Spotify Player

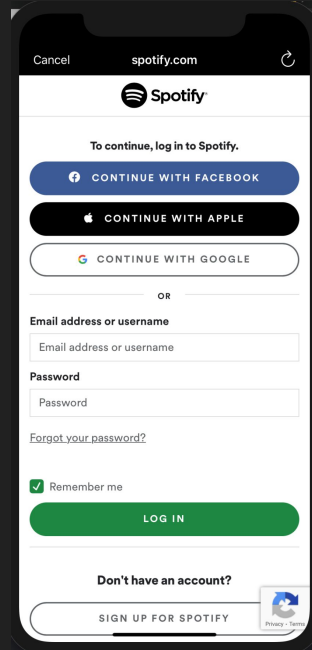
Prompt upon successful signup



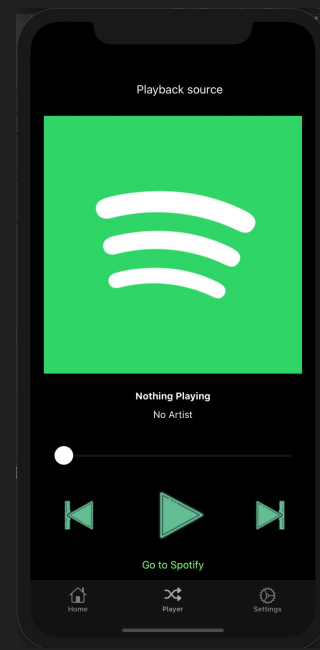
Connect Screen



Spotify Login

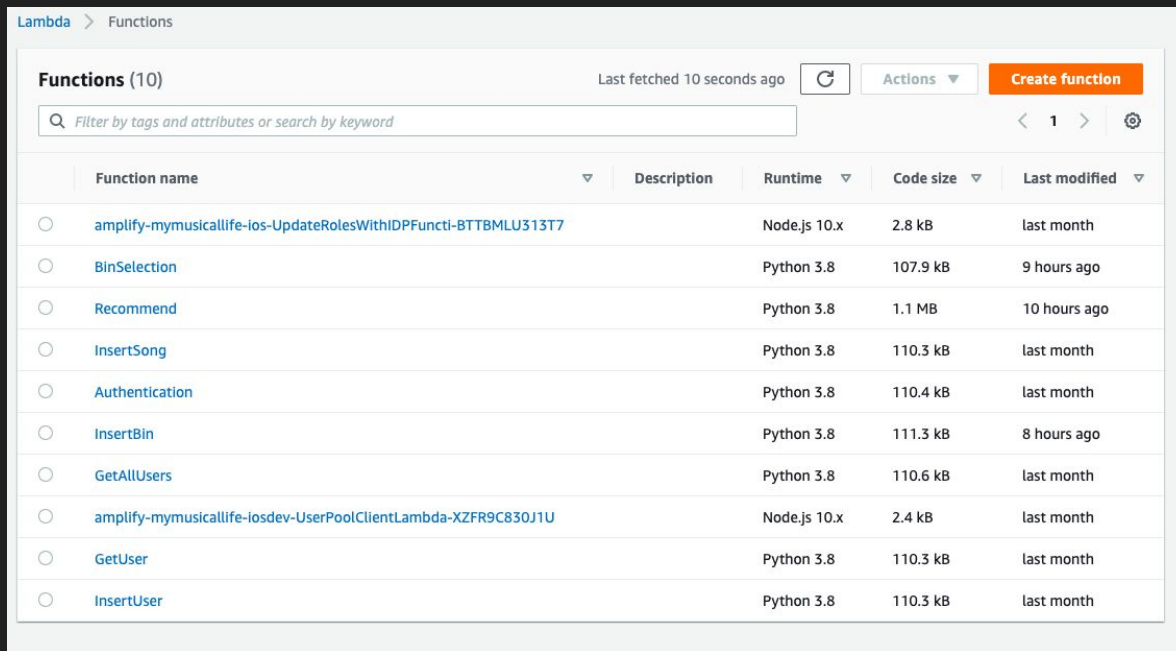


Music Player



# Back End

- AWS Lambda
  - User-Login
  - Inserting Songs, Bins
  - Song Recommendations
  - Bin Selection Algorithm



The screenshot shows the AWS Lambda console interface. At the top, it says "Lambda > Functions". Below that, there's a header for "Functions (10)" with a refresh button and a "Last fetched 10 seconds ago" timestamp. There's also an "Actions" dropdown and a prominent orange "Create function" button. A search bar is present with the placeholder text "Filter by tags and attributes or search by keyword". The main content is a table with columns for "Function name", "Description", "Runtime", "Code size", and "Last modified". Each row has a radio button to its left. The functions listed are:

Function name	Description	Runtime	Code size	Last modified
<input type="radio"/> amplify-mymusicallife-ios-UpdateRolesWithIDPFuncti-BTTBMLU313T7		Node.js 10.x	2.8 kB	last month
<input type="radio"/> BinSelection		Python 3.8	107.9 kB	9 hours ago
<input type="radio"/> Recommend		Python 3.8	1.1 MB	10 hours ago
<input type="radio"/> InsertSong		Python 3.8	110.3 kB	last month
<input type="radio"/> Authentication		Python 3.8	110.4 kB	last month
<input type="radio"/> InsertBin		Python 3.8	111.3 kB	8 hours ago
<input type="radio"/> GetAllUsers		Python 3.8	110.6 kB	last month
<input type="radio"/> amplify-mymusicallife-iosdev-UserPoolClientLambda-XZFR9C830J1U		Node.js 10.x	2.4 kB	last month
<input type="radio"/> GetUser		Python 3.8	110.3 kB	last month
<input type="radio"/> InsertUser		Python 3.8	110.3 kB	last month

# Back End

- AWS Lambda REST API
- AWS API Gateway
- REST API Authentication
  - JWT Authorizer
  - Auth0 Provider
  - Access Token



POSTMAN



**Amazon API  
Gateway**

+



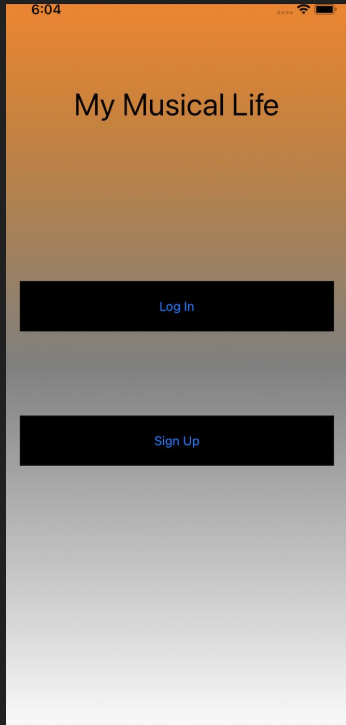
**Lambda  
function**

# Testing

- Unit testing to test functionality of app
  - UI tests have been developed
- `iOSSnapshotTestCase`
  - Screenshots taken of UI

# Testing con.

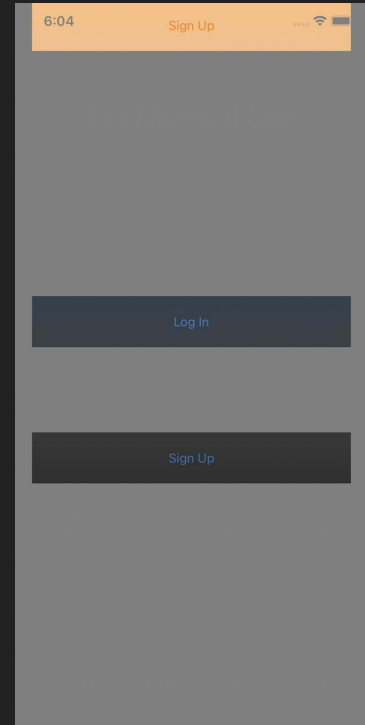
Reference



Failed



Diff



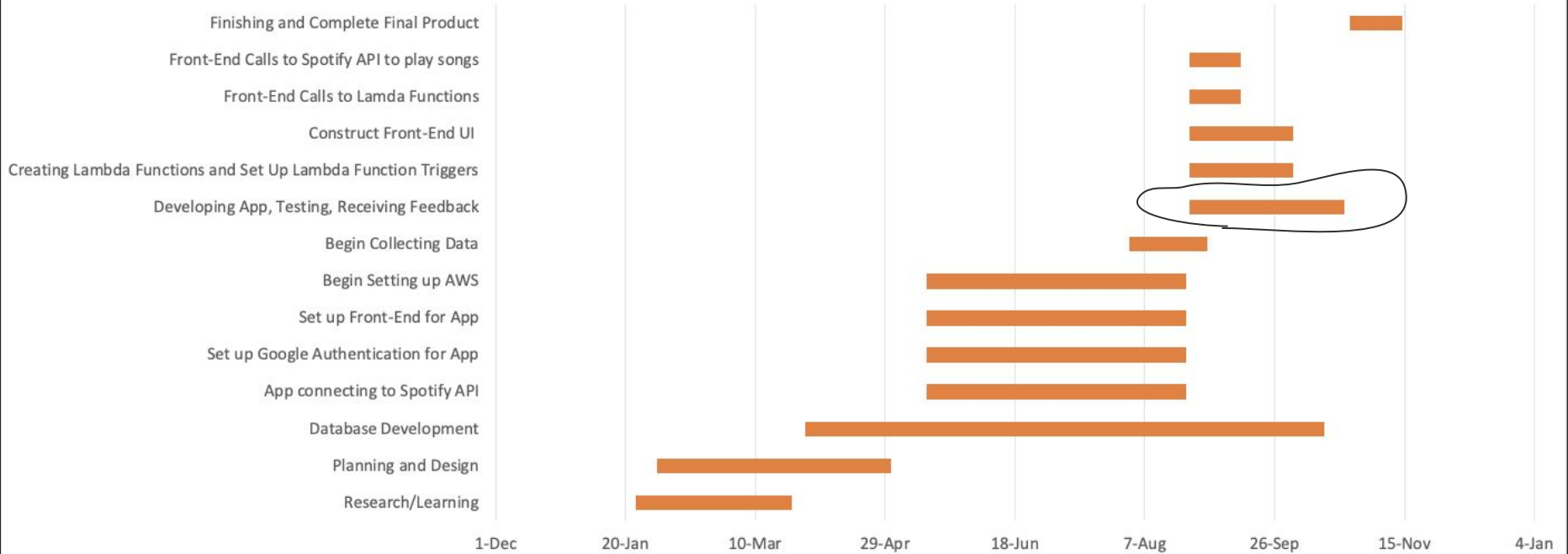
# Technical Challenge

- Bin Selection Algorithm



# Schedule

Project Timeline



# Future Work

- Finish implementation of bin selection algorithm
- Run it against test data
- Run it against real world data
- Continuously adjust tolerances and weights for improvement

THANK YOU!!