



Etude

The Better Practice App

Interactive IV
Final Project Document
October 27, 2014

This document details the process used to design the user experience and visuals for Etude, a music practice application for intermediate to advanced musicians.

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Goal

Creating a practice application that listens to intonation and tempo data while a musician is practicing and then analyzes it in a comprehensive way that showcases chronological improvement.

The app analyzes sound data from the phone's microphone or an external microphone.

A tuner, metronome, and recorder are available during practice sessions.

The music log keeps each piece's records separate from the others.

Customizable notifications can be sent when the user hasn't used the app in a while.

Competitive Research

Music Journal

Tunable

Metronome+

Summary

Music Journal

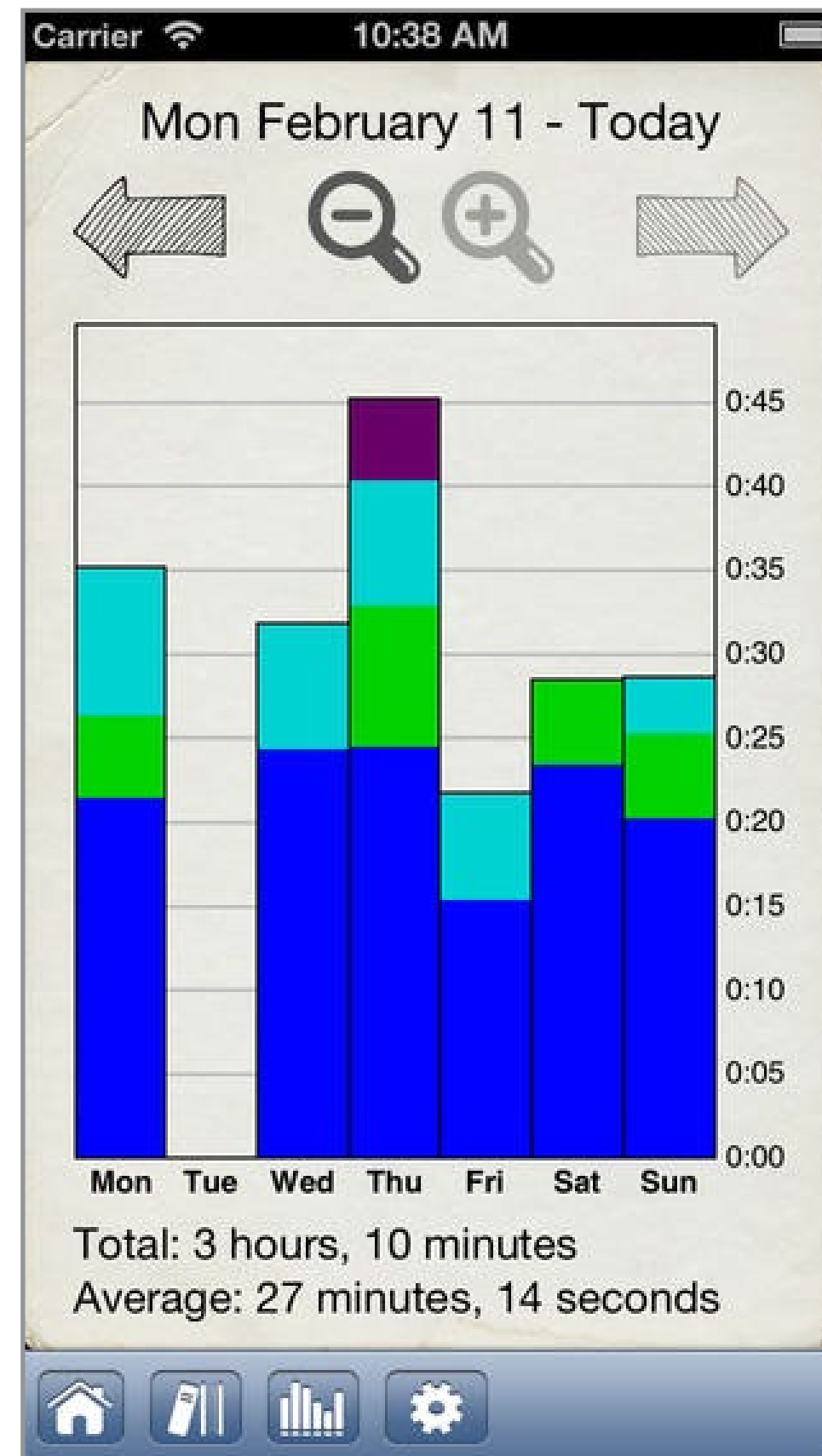
An app for iOS that tracks when and how long a musician practices certain pieces of music.

Includes color-coded folders for different sections of a person's practice repertoire.

Graphs out how long the musician practices each kind of piece (e.g., scales versus solos).

Allows for notes on days or folders to document goals and feelings.

Day Graph



Practice Session



Folder Details



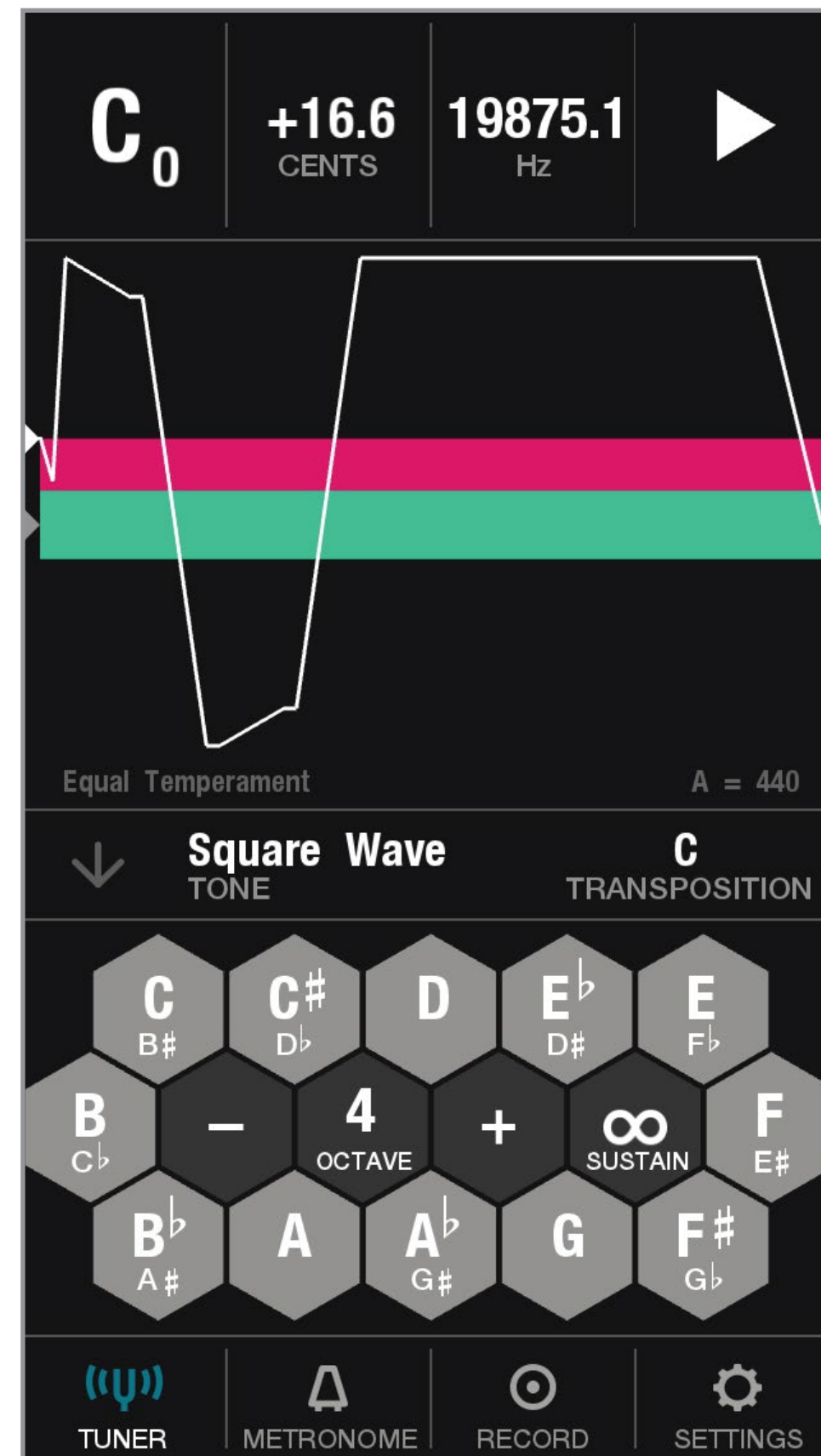
Tunable

A simple tuner and metronome for iOS and Android.

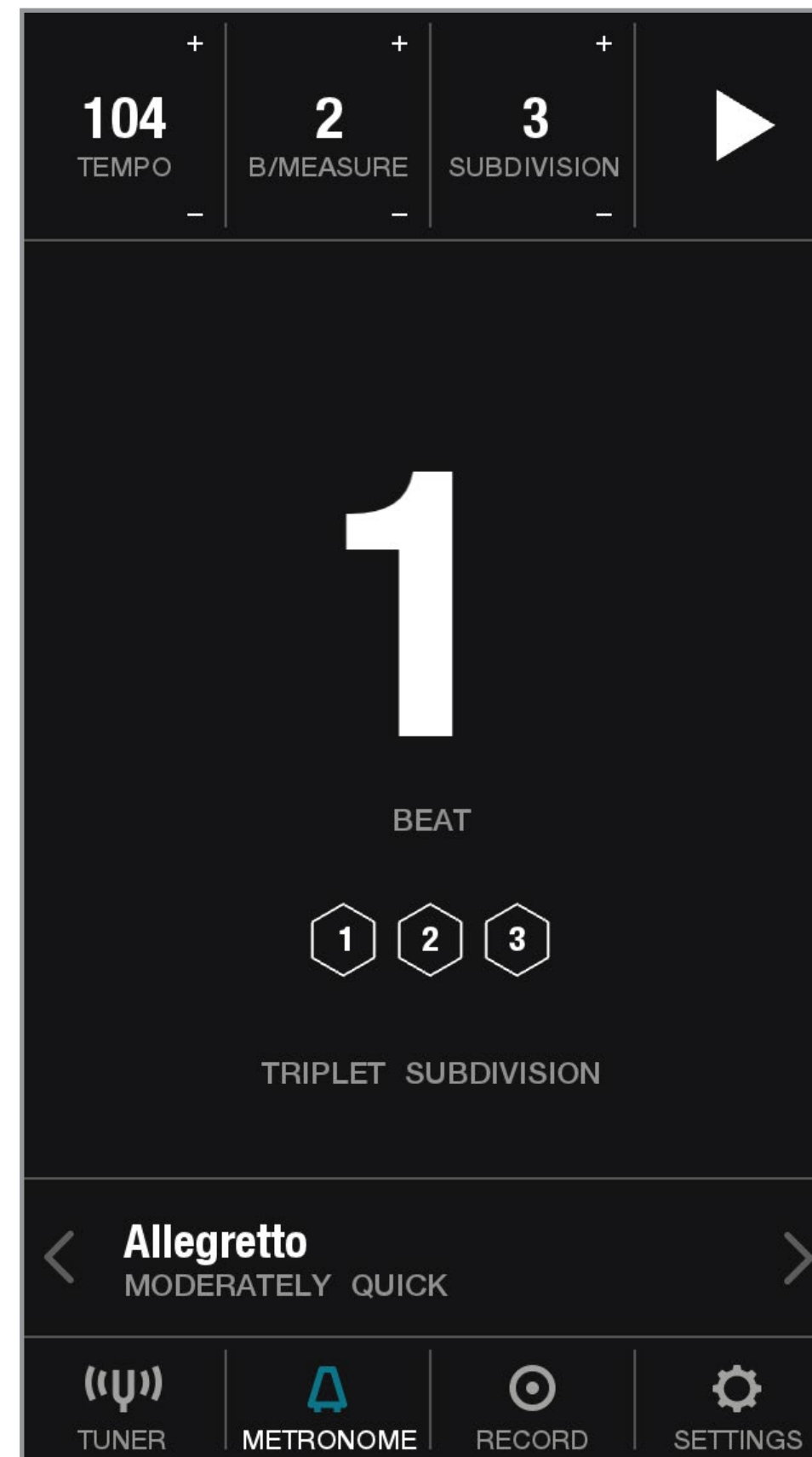
Musicians can record a piece and send it to other people or play it back and listen as the tuner grades the intonation.

Capability to change the intonation system to one of fifteen different systems.

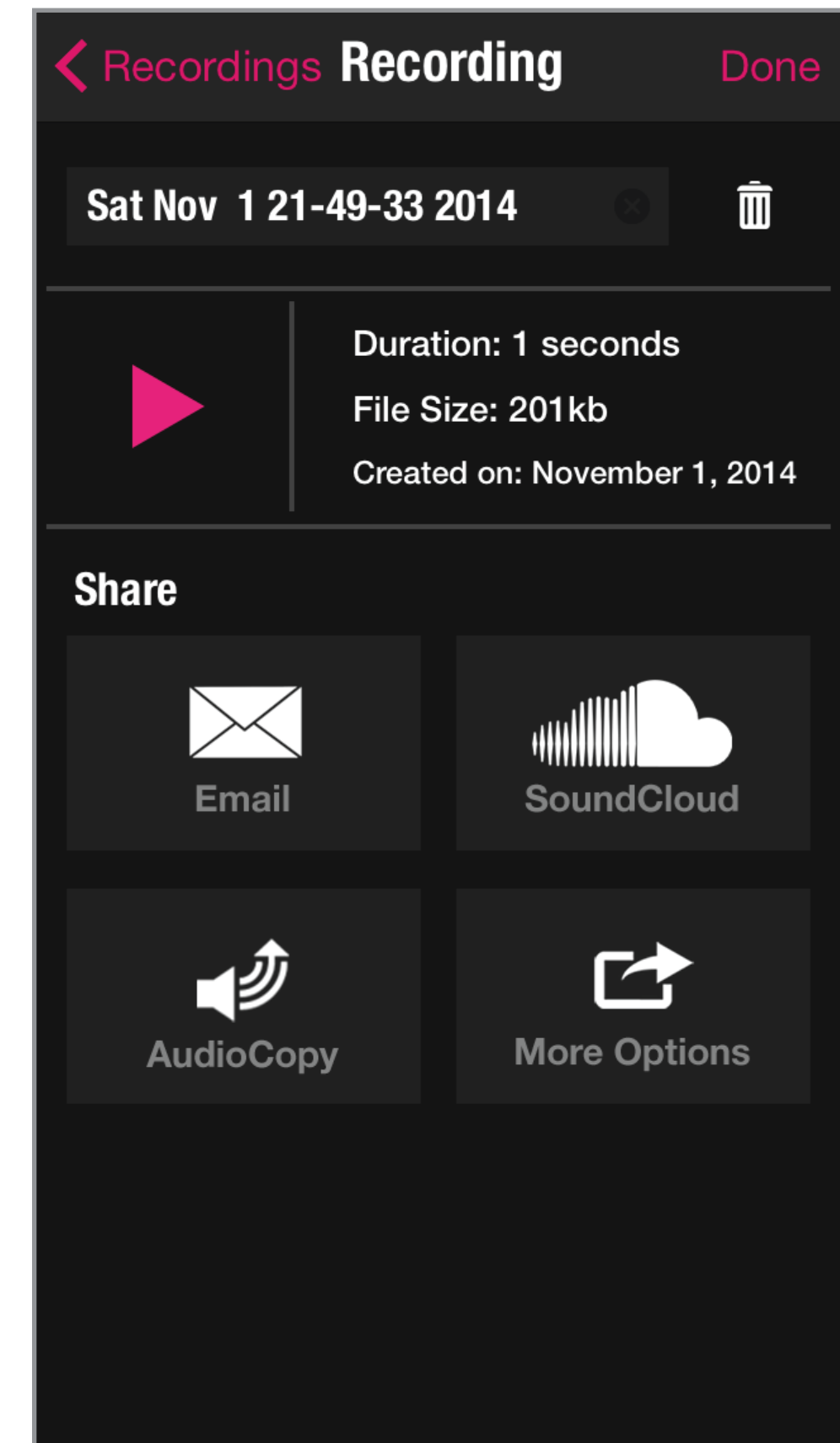
Tuner



Metronome



Recording



Metronome+

A combined metronome and tuner that lets musicians measure their pitch and speed.

Musicians can record their practice sessions and check their pitch while using the metronome.

The metronome includes subdivisions for difficult rhythmic patterns.

Record

4 Brand New Modes!

Record Mode
Pitch Mode
Practice Mode
Setlist Mode



RECORD MODE
Record your practice sessions

Tuner


"simple to use and brilliantly designed"
- evolver.fm



PITCH MODE
Chromatic pitch player works simultaneously with metronome

metronome

Set BPM increase amount



Set number of measures to loop

PRACTICE MODE
Program Metronome+ to change tempo automatically

Summary

Etude needs a metronome, tuner, recorder, and a way to keep track of the pieces the user plays.

The metronomes have subdivisions for difficult rhythms.

A live tuner is accessed while replaying recordings.

Detailed logs of how long musicians practice stress out the user.

Tracking pieces at a lower level is helpful.

User Research

Main Audience

Personas & User Flows

Main Audience

Etude's main audience is comprised of musicians who are intermediate to advanced in skill level, late teens to early forties.

Familiar with other tuner or metronome smartphone apps

Old enough to have the skill to interpret data

Young enough to use new technology

Very busy and practices extensively

Persona 1



Gideon is majoring in music performance in college.

19 years old.

Has a professor that works with him on pieces.

Very busy juggling classes, work, practicing, and homework.

Practices many pieces at once.

Very comfortable with technology.

Extremely open to change.

Persona 2



Miranda is a professional musician in a symphony.

36 years old.

Has a regular practice and work routine.

Very skilled in music and knows how to play well.

Uses practice tools frequently.

Has a preferred tool already.

Open to change but set into a routine.

Features

Practice

Record

Taxonomy

Practice

While practicing pieces, the app tracks pitch and speed and visually breaks the data down afterward with comparisons to goals and chronology.

Tracking is separated piece by piece, so practicing many different pieces at once won't confuse the app.

Musicians can save a goal tempo to reach for each piece.

The tuner gives visual indications when a note is out of tune.

The metronome is customized with beat divisions, time signatures, and visual indication of tempo.

Notifications are sent out to remind the musician to practice if the app hasn't been used in two days.

Record

Musicians can record practice sessions or make a professional recording.

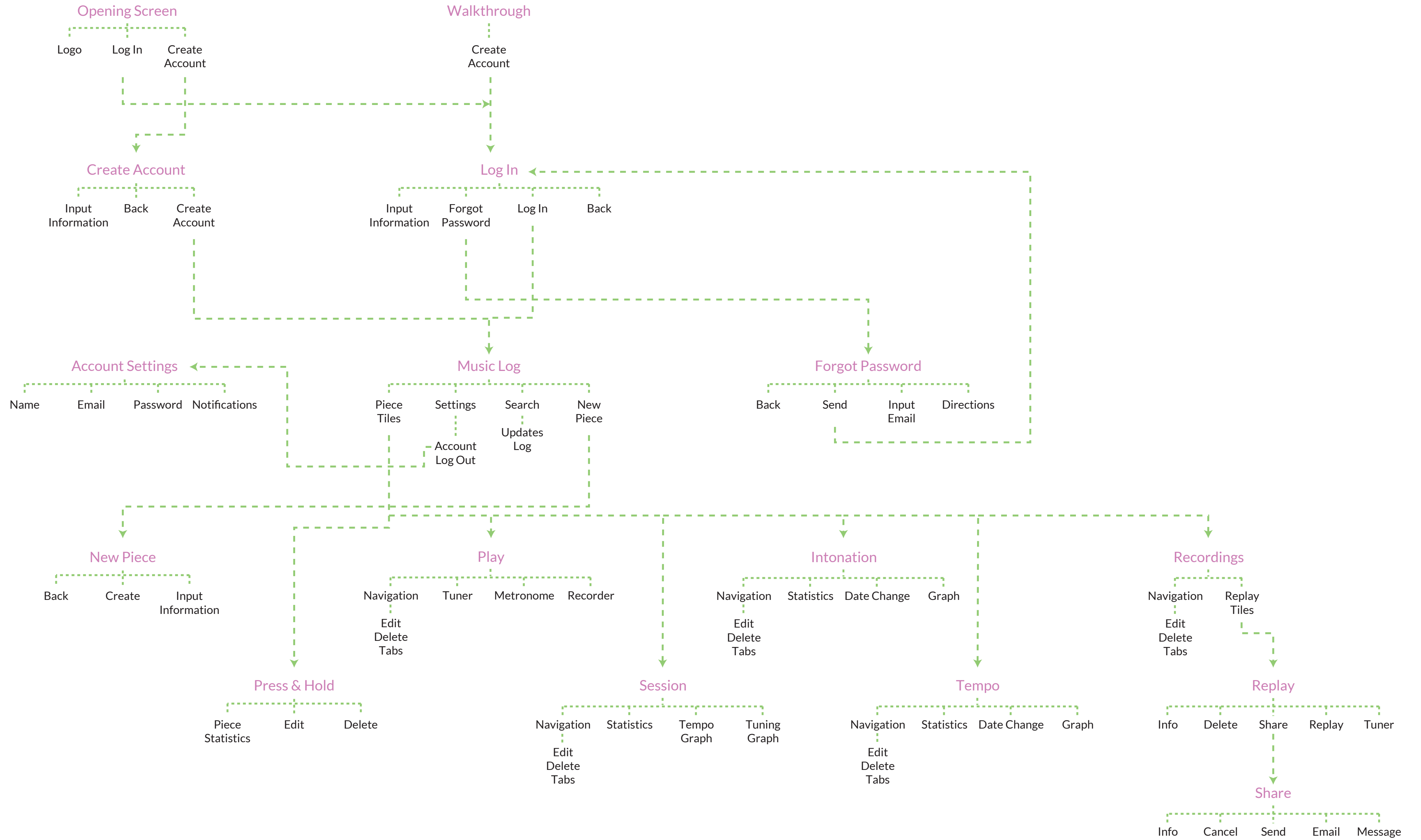
Recordings are saved in chronological order and are listed by the date and time.

Musicians can replay them and watch a live analysis of their intonation, dynamics, and speed.

Recordings can be exported to file and shared through email with personal messages attached.

Taxonomy

The app is structured in layers, which is interpreted within the visual comps with interactions.



Wireframes

User Flow

Base Grid System

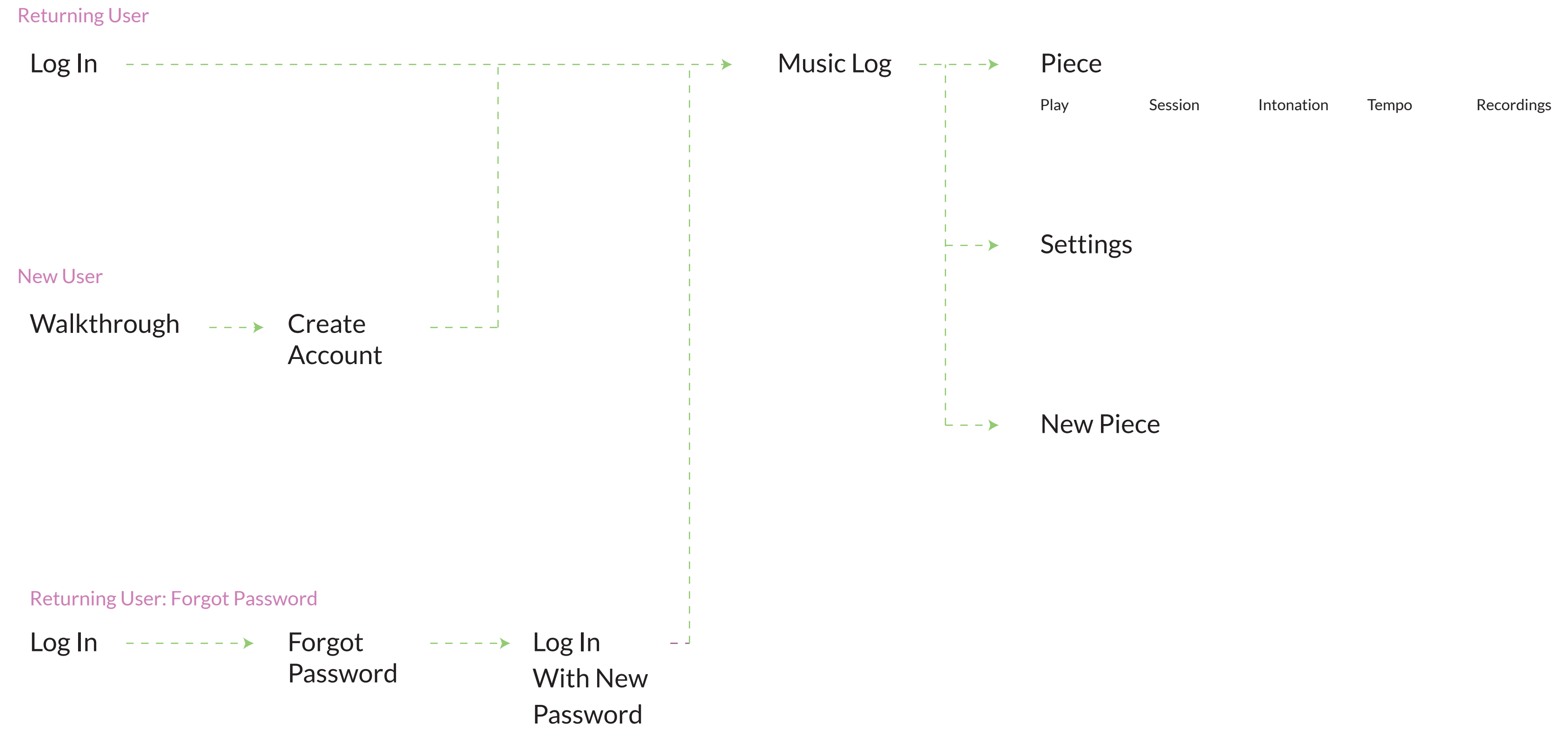
Core UX Template

Orientation Strategy

Wireframe Progression

Final Wireframes

User Flow



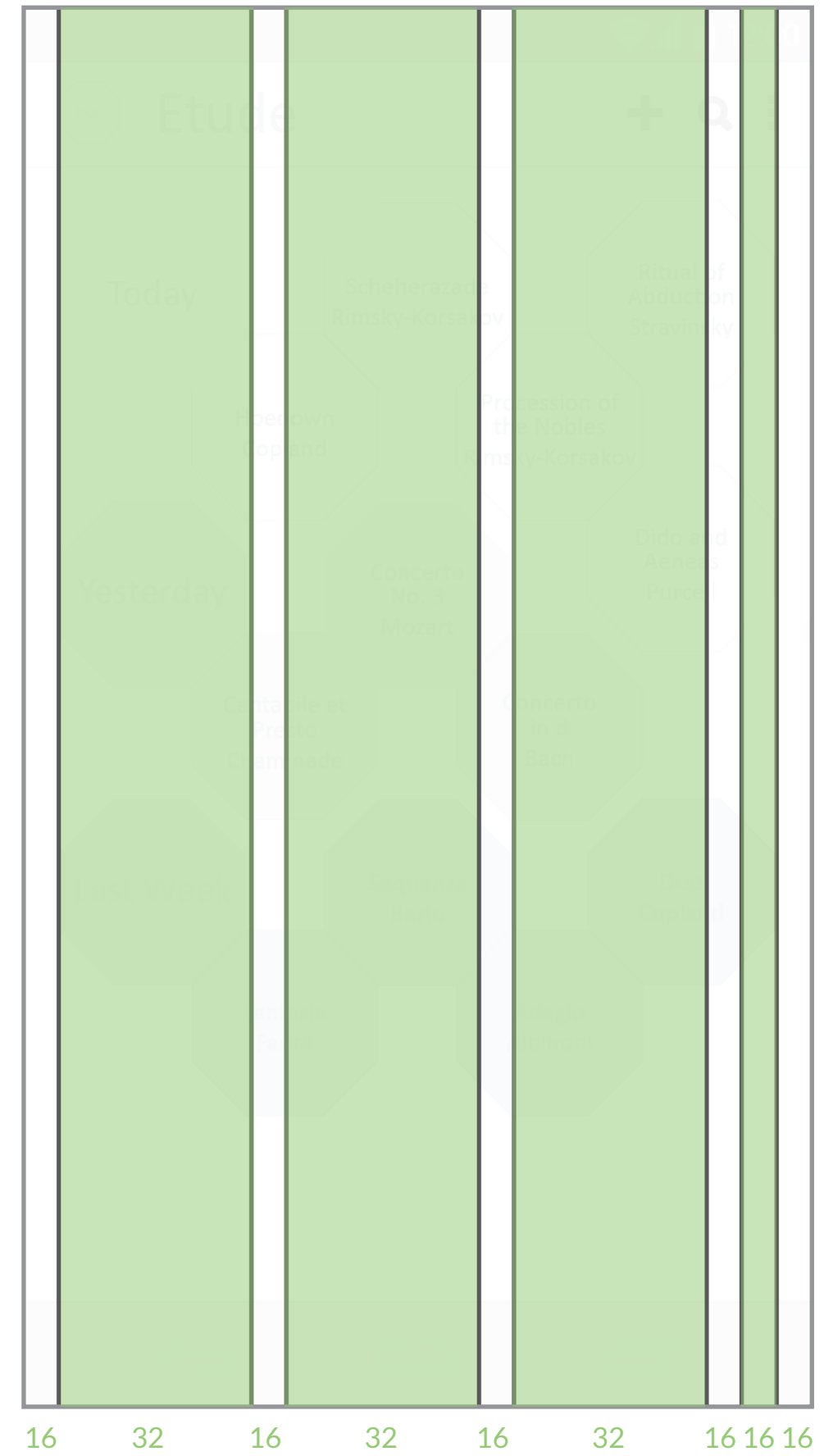
Base Grid System

Primary output at XHDPI (640 pixels X 1280 pixels).

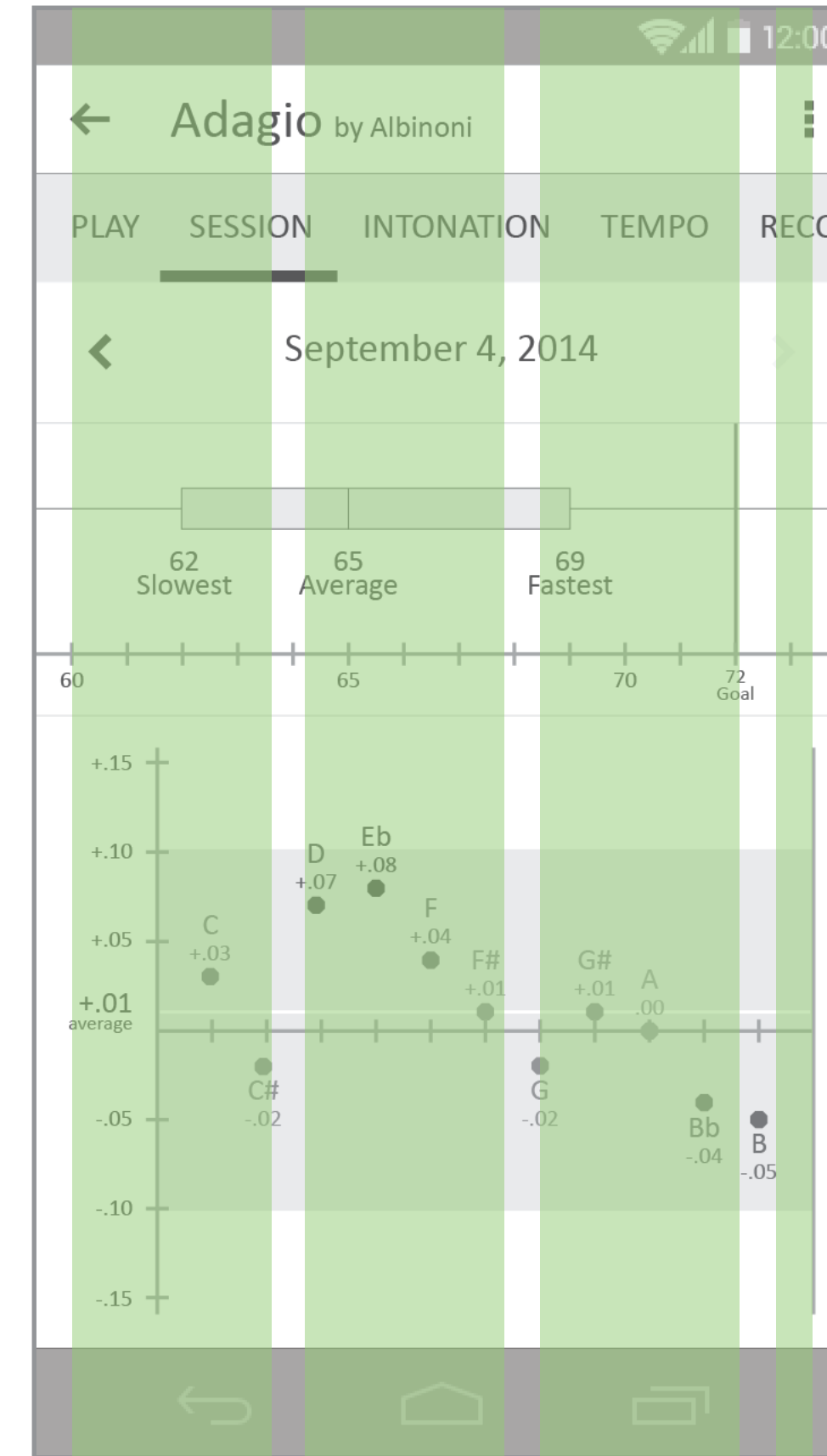
Alternating 16 dpi/32 pixels and 88 dpi/176 pixels columns. Starts with a 16 dpi column and ends with three 16 dpi columns.

Objects on screen fall within the outermost 16 dpi columns, with a few in context exemptions.

Base Grid



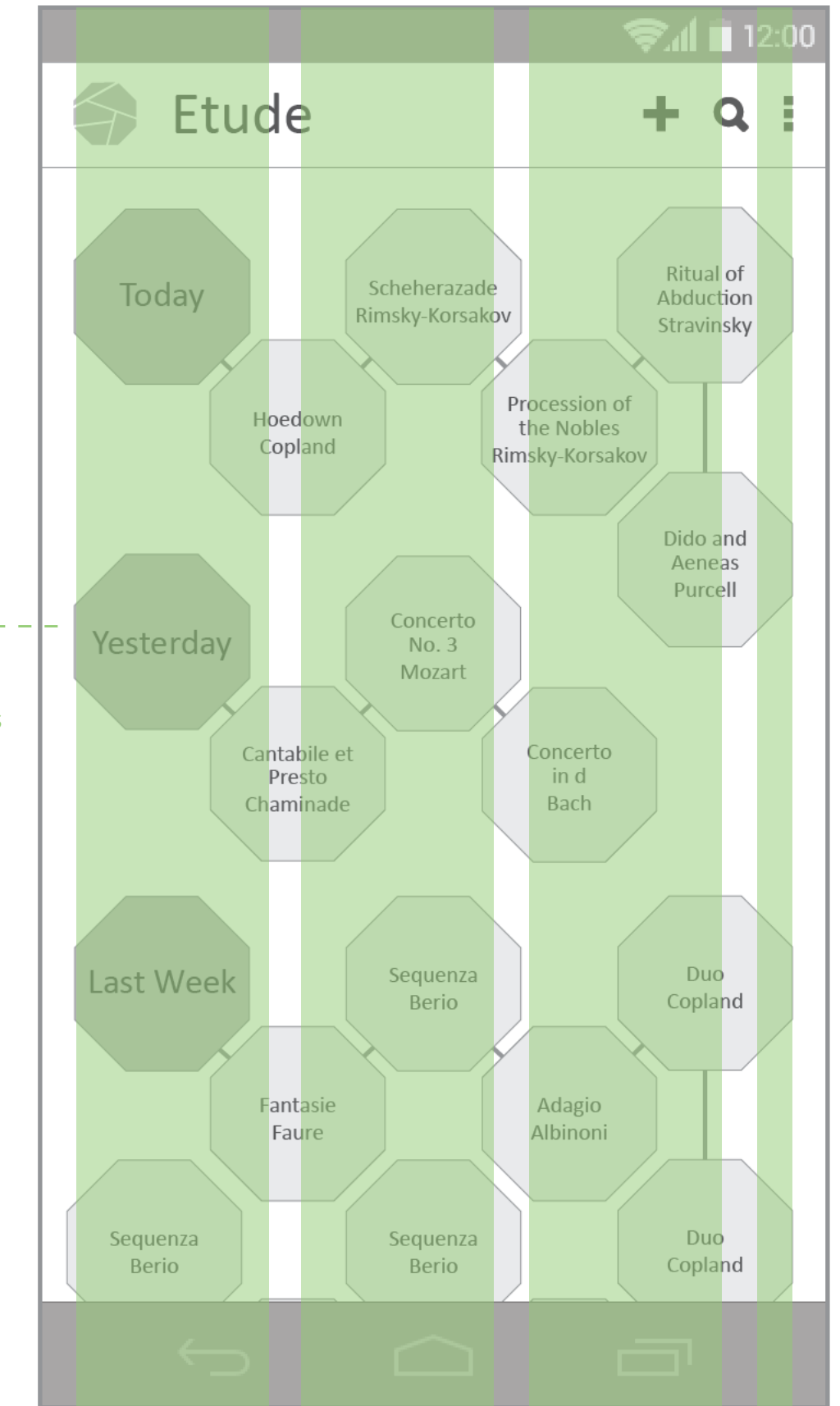
Base Grid over Song: Session



Tabs align to the grid at the ends but extend off the edge to show their scroll-ability.

Home octagons are spaced according to date, with each cluster 16 dpi below the last.

Base Grid over Music Log



Core UX Template

Android status bar and soft buttons are at the top and bottom of the screen.

Primary navigation is 48 dpi / 96 pixels tall and elements within conform to the 16 dpi padding on each side of the screen.

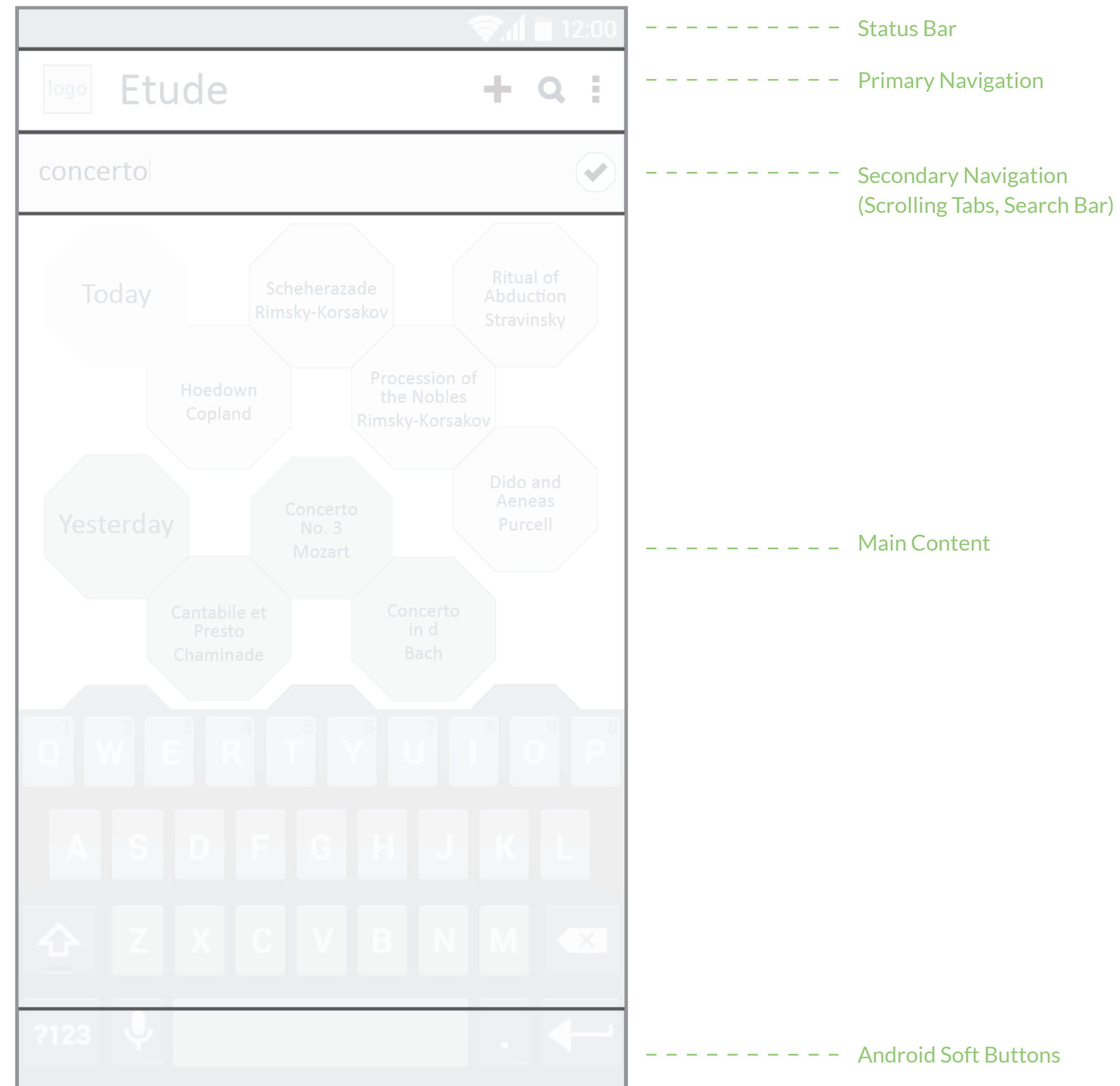
Secondary navigational elements (search boxes, scrolling tabs, and buttons to close modular screens) are also 48 dpi / 96 pixels tall and are located underneath the primary navigation.

These elements include exceptions to the baseline grid such as scrolling tabs.

The main content fills the rest of the screen, with 16 dpi margins on the left, right, and top.

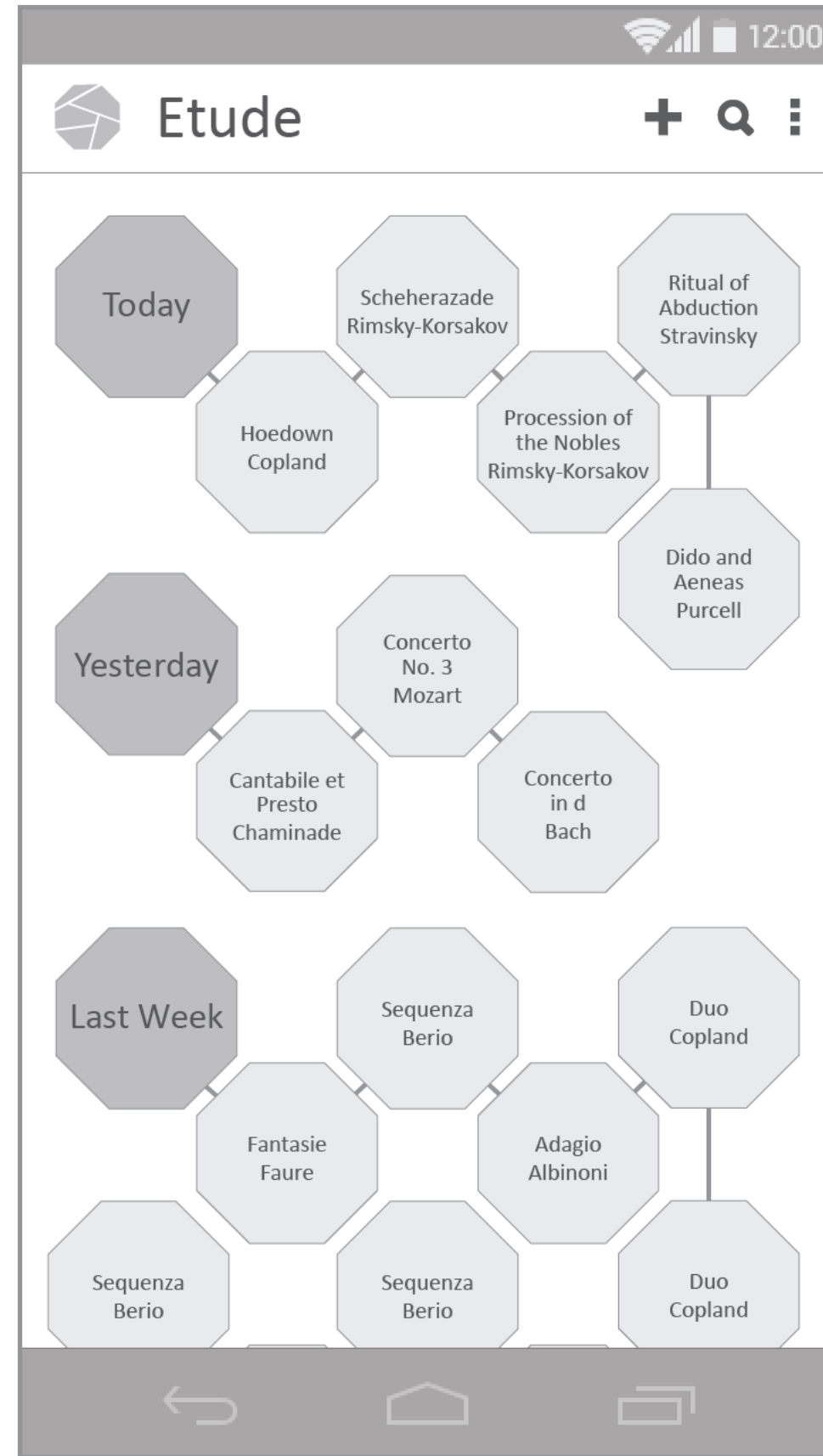
On pages that do not scroll, the bottom of the content also has a 16 dpi margin.

Core UX Template

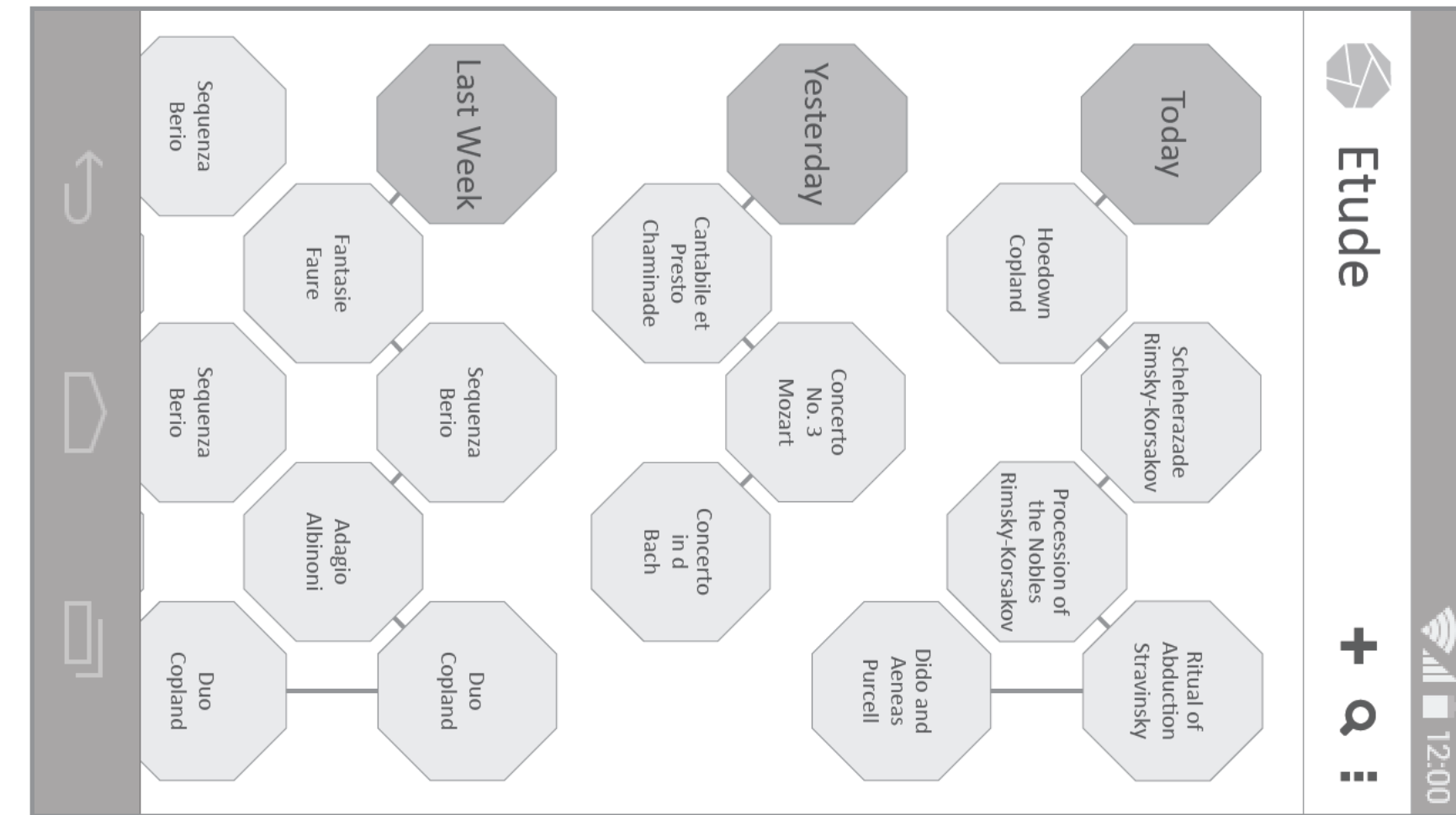


Orientation Strategy

A landscape mode will be developed in the second phase of the project.



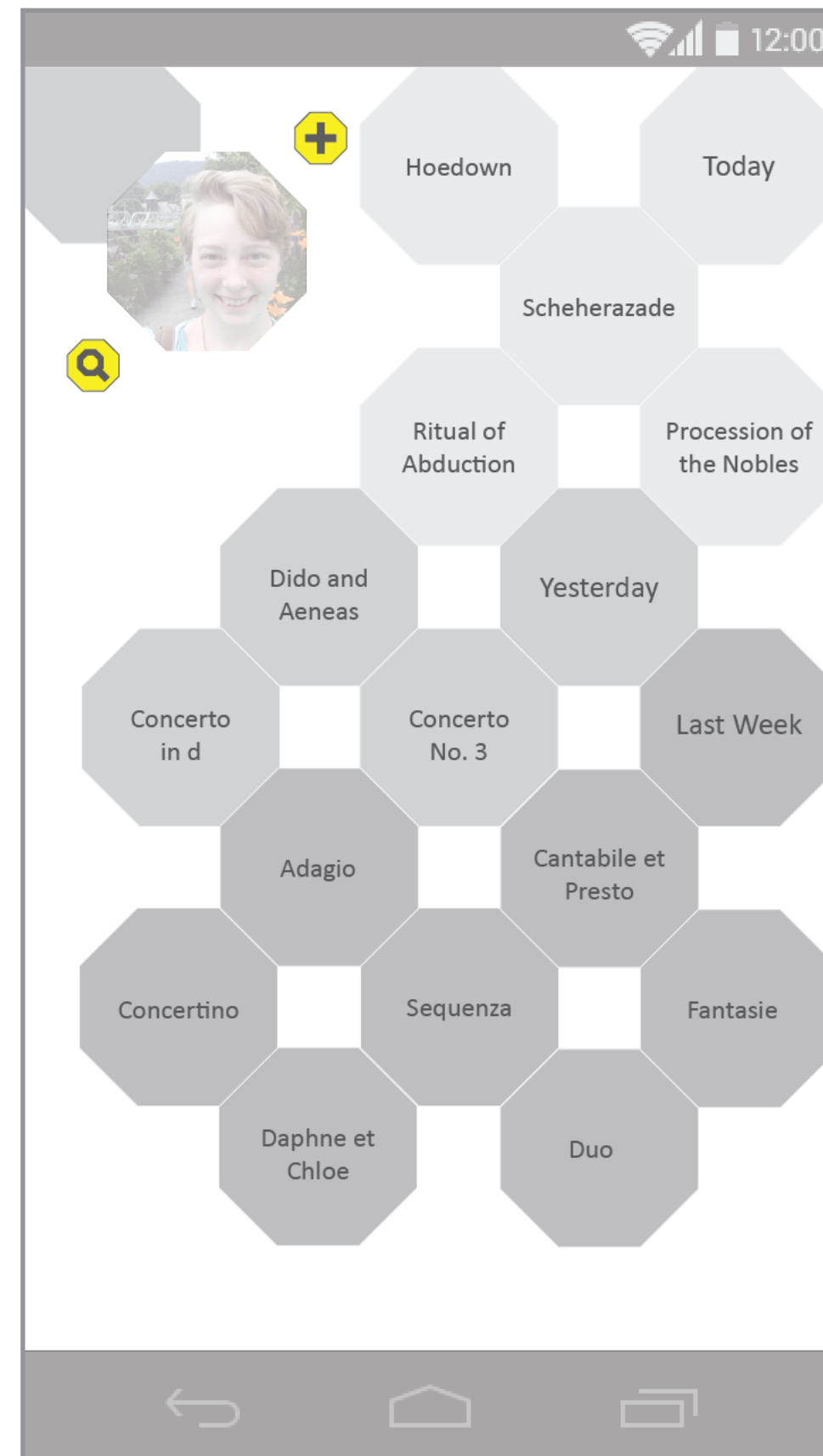
The app is locked in portrait mode.



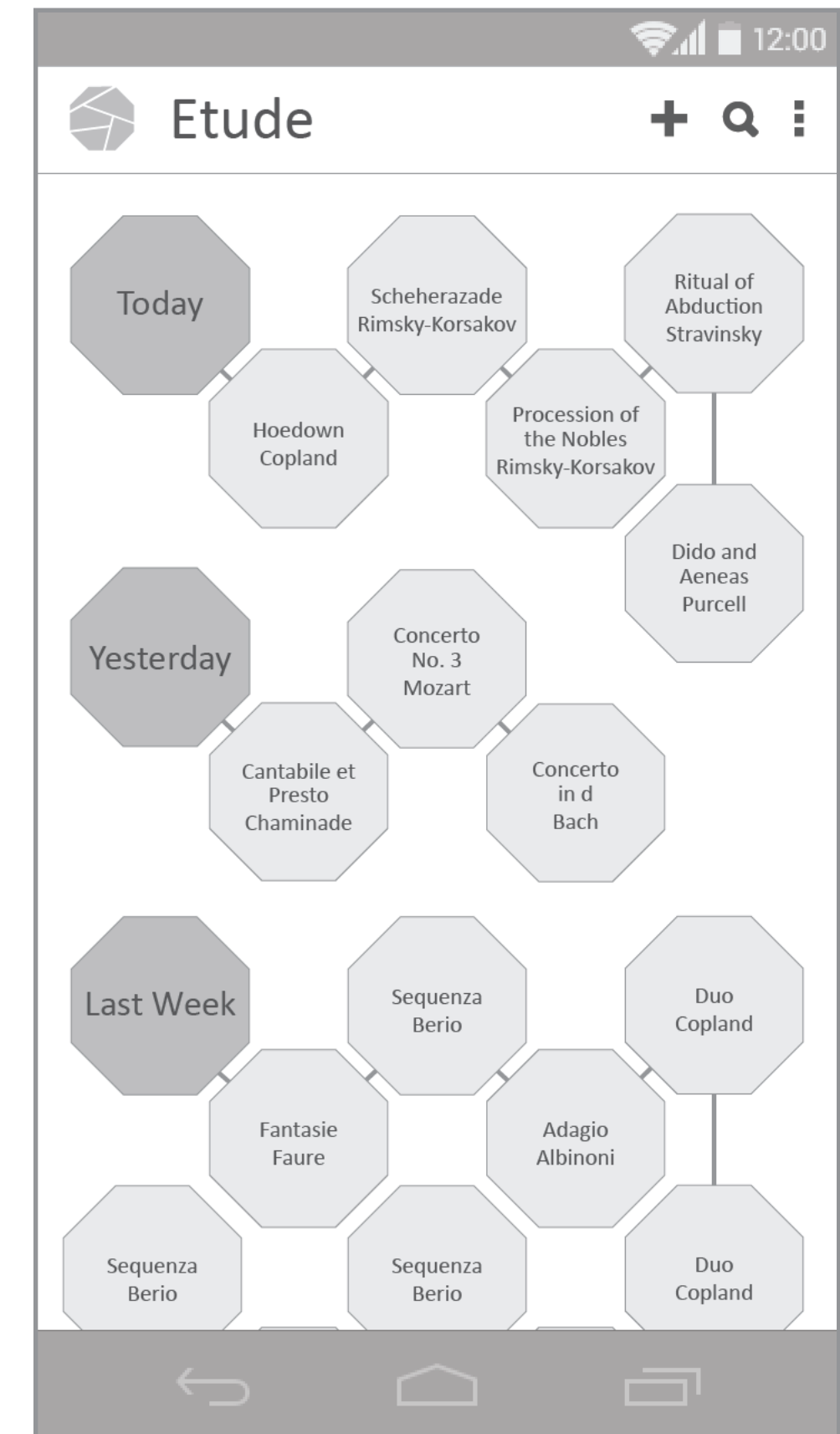
Wireframe Progression

The initial UI was too confusing;
simplifications were made for the
final version.

First Version: Music Log



Final Version: Music Log



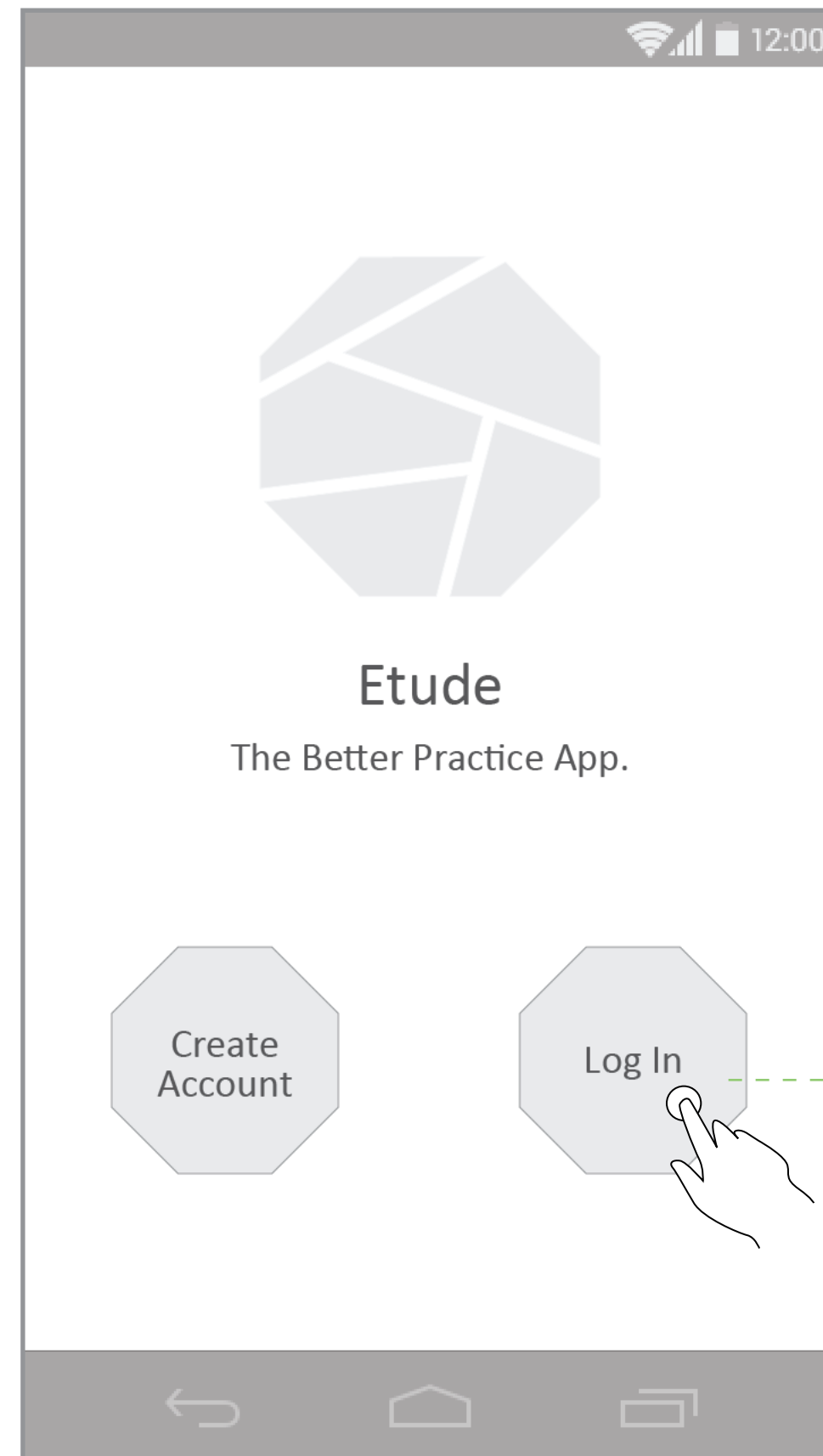
The arrangement of the
orcatgonal piece tiles is spaced
out and from left to right.

Navigation is arranged in a
more typical structure.

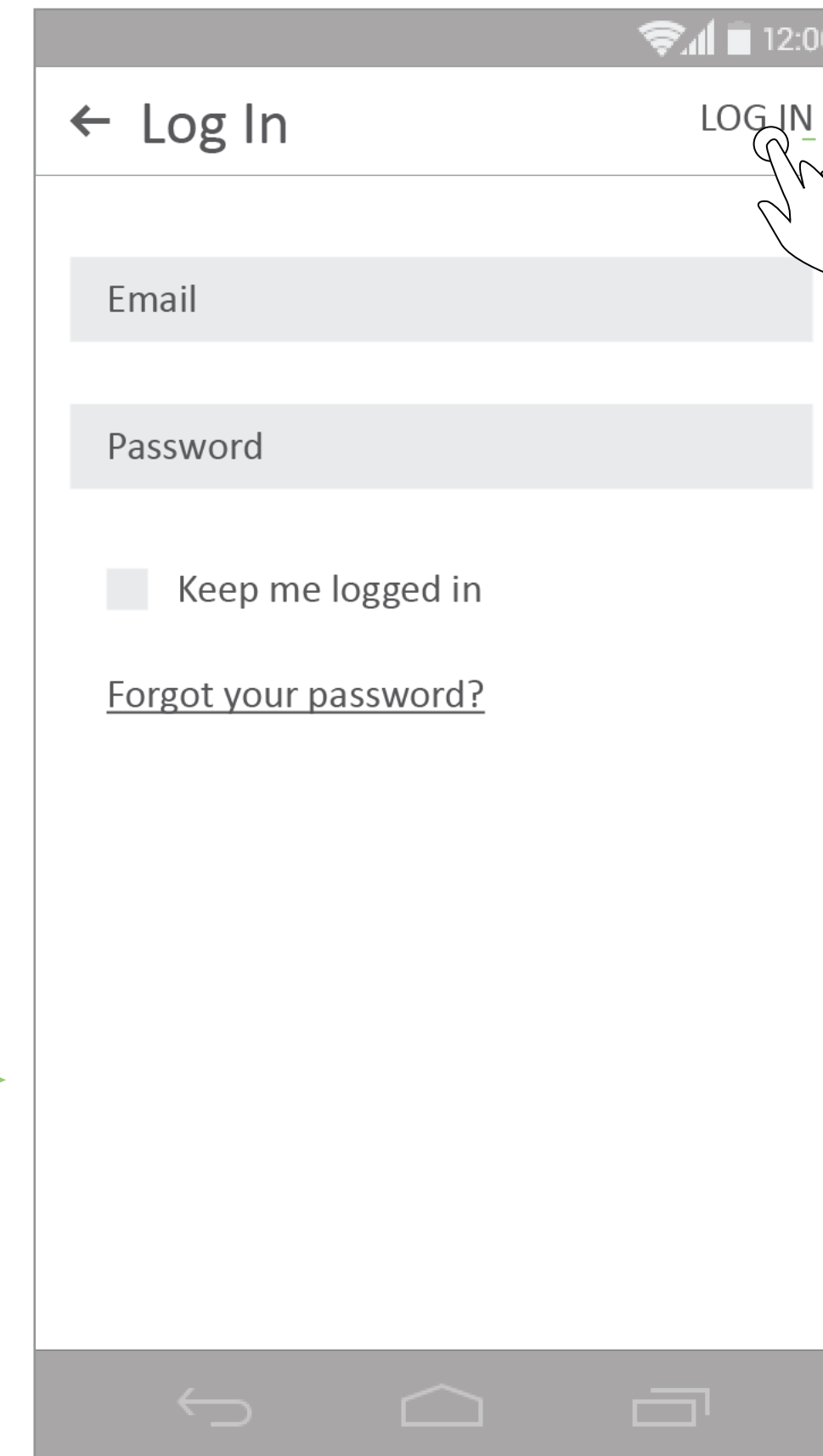
Log In: Returning User

Users have the choice to keep themselves logged in from session to session.

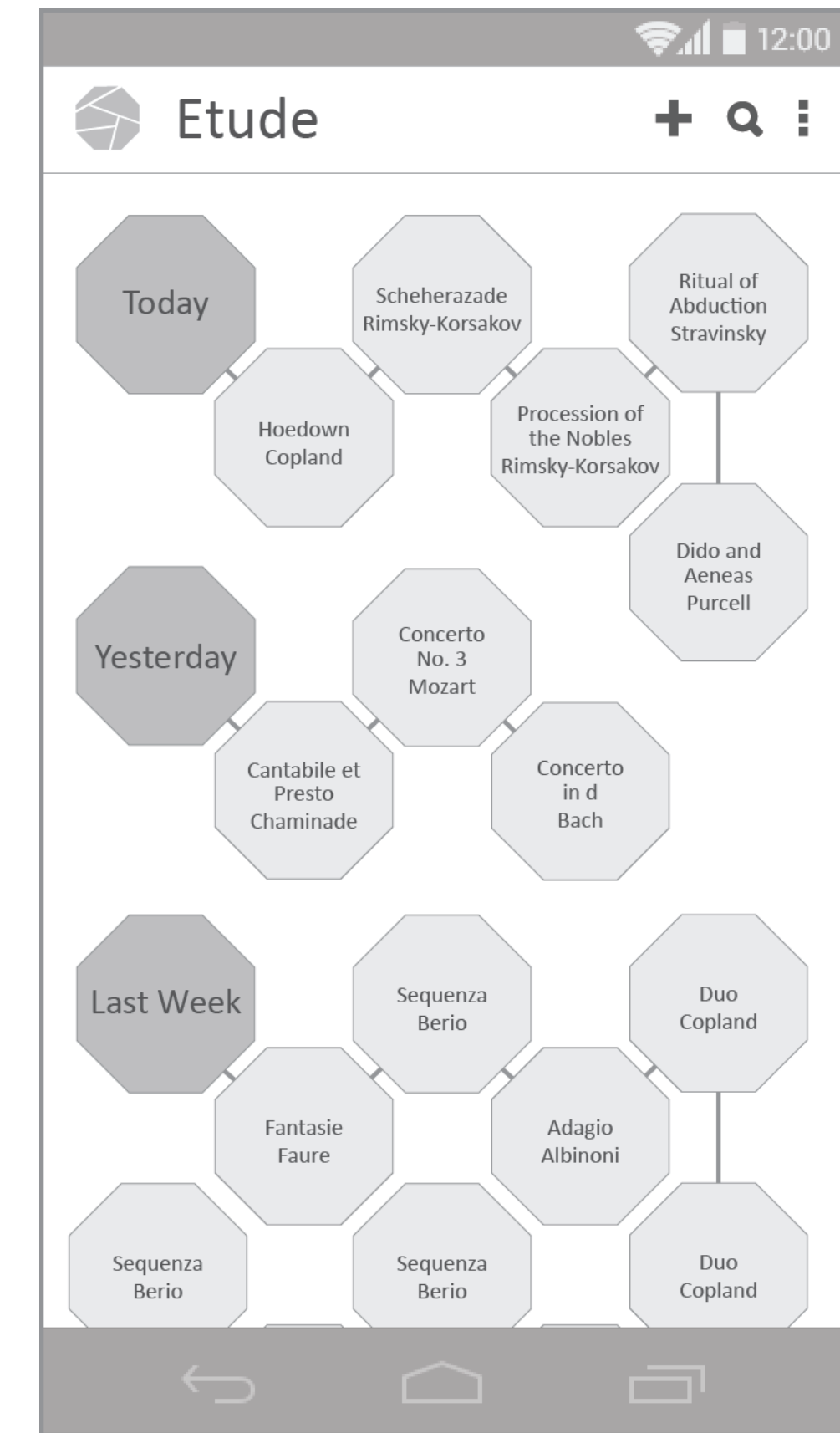
Opening Screen



Log In



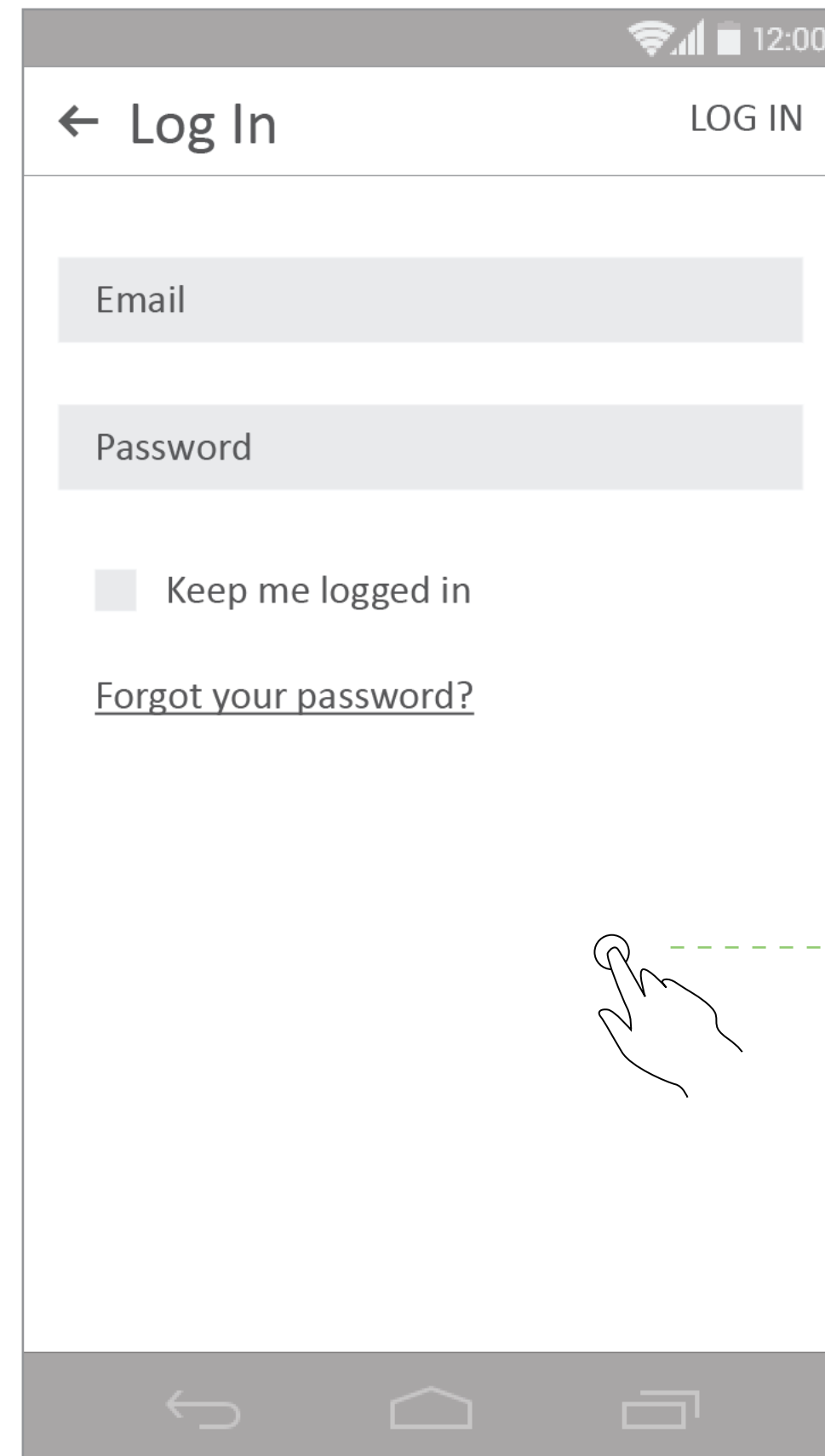
Music Log



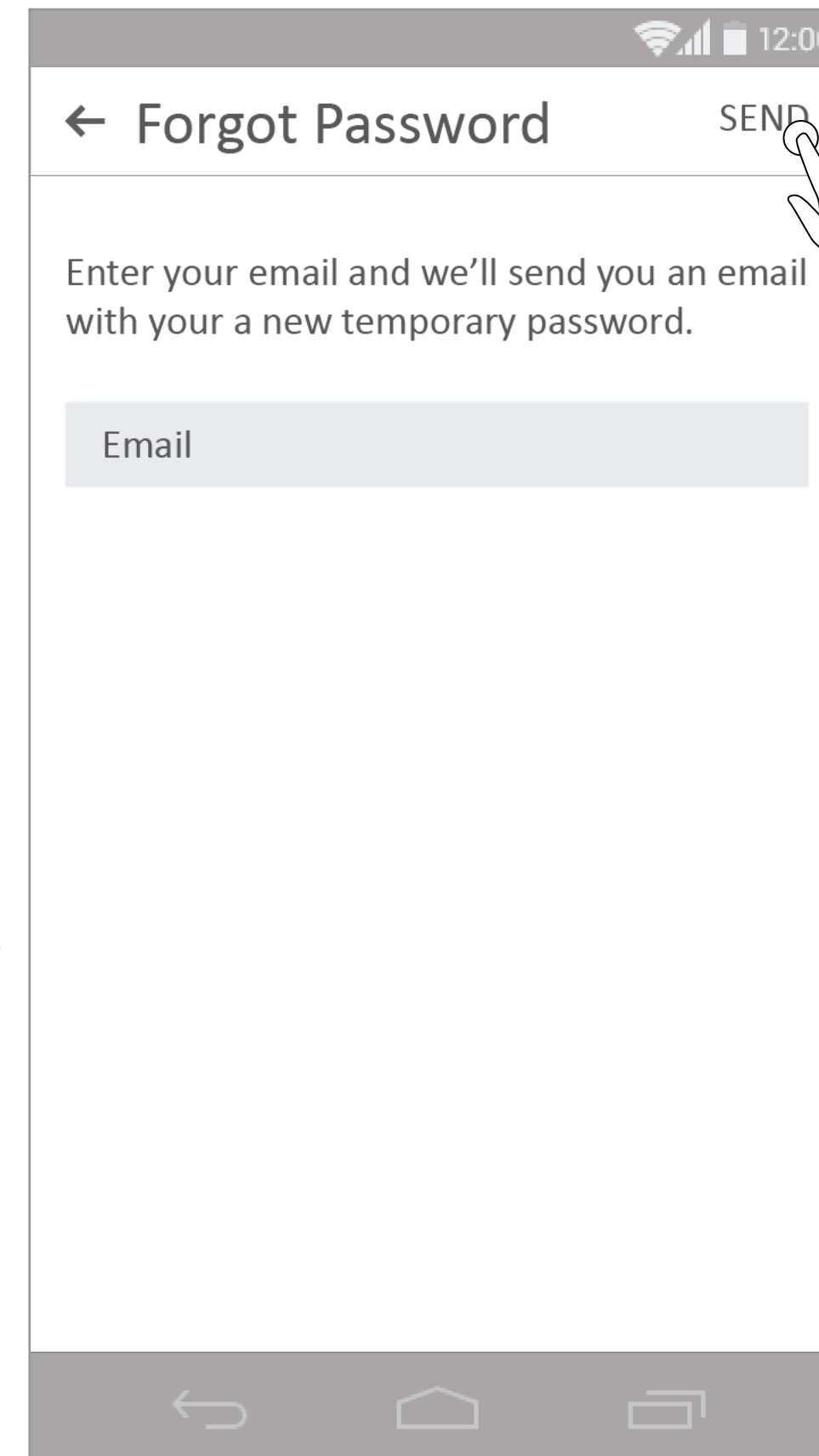
Log In: Forgotten Password

If users forget their password, they are sent a new temporary password.

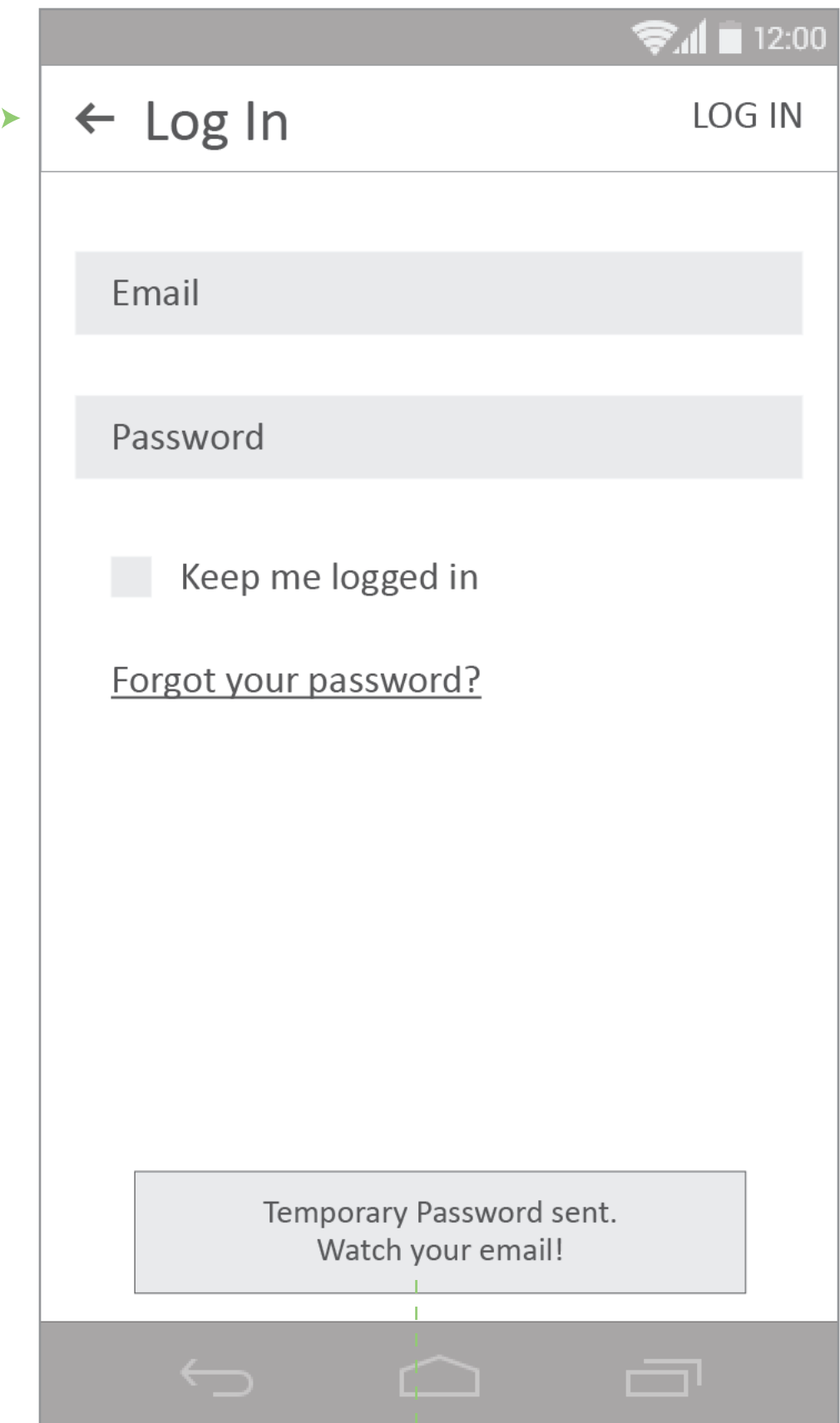
Log in



Forgot Password



Log In: Sent Temporary Password

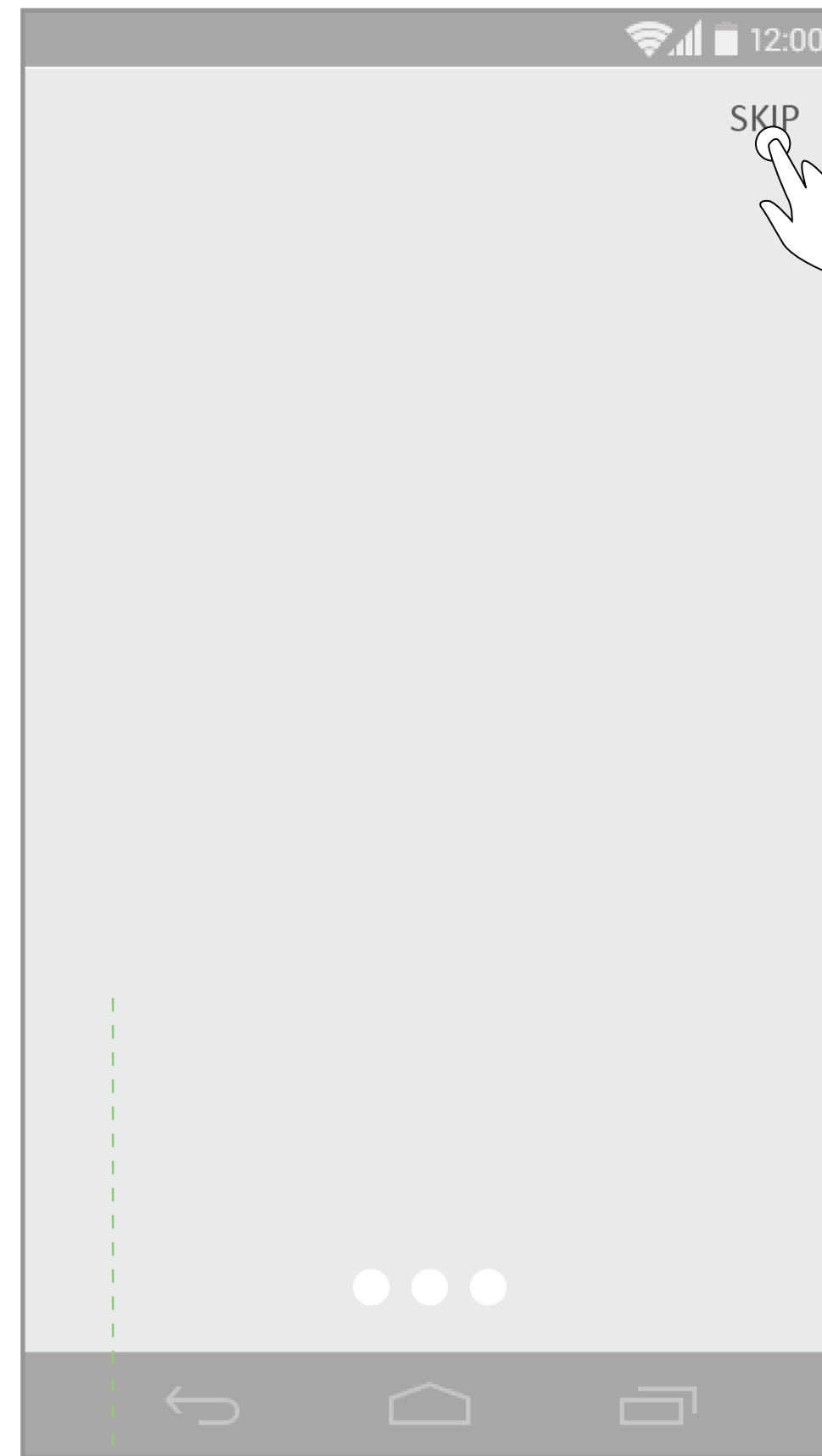


The pop up will fade after five seconds.

Create Account

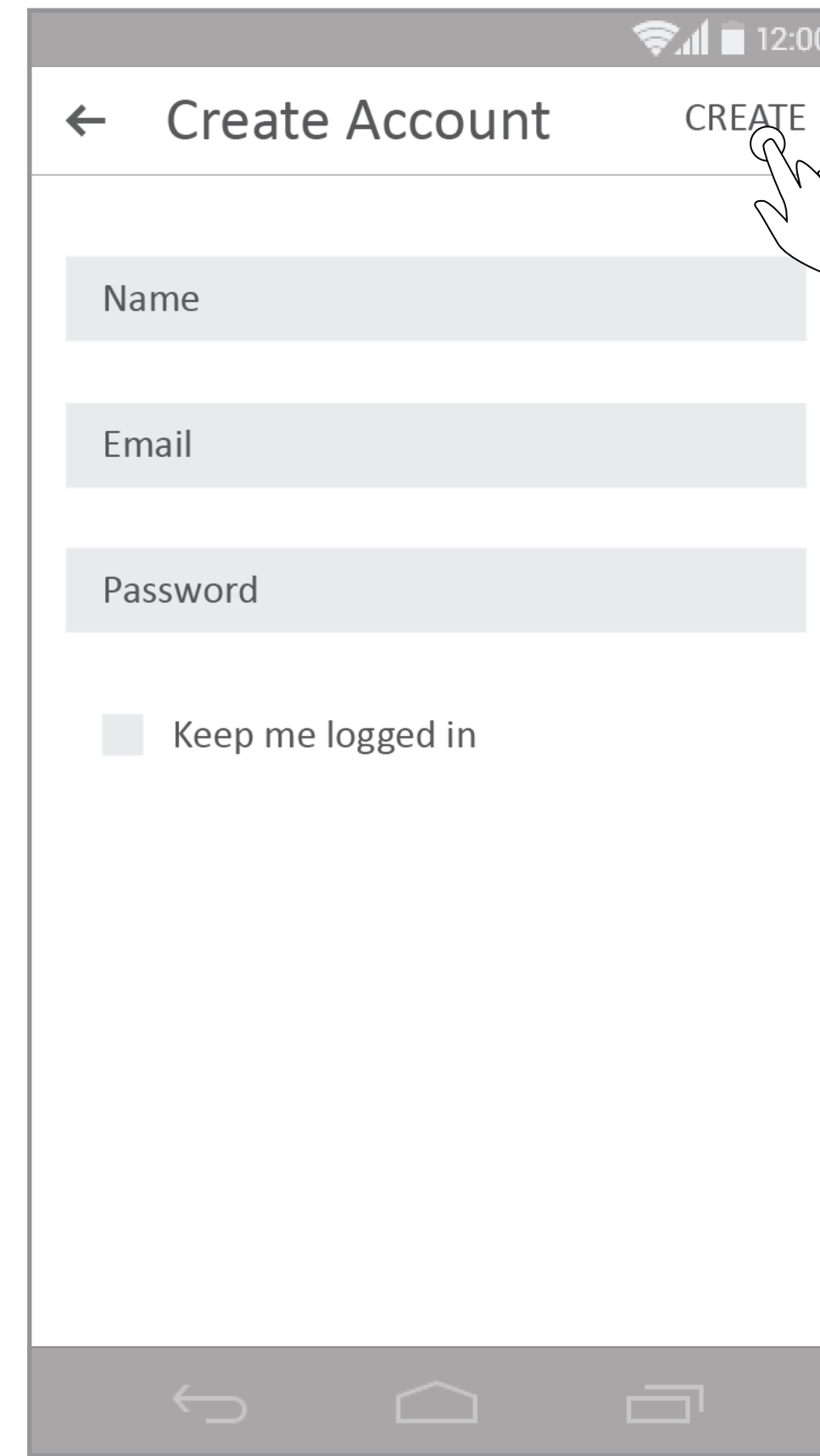
A walkthrough is shown the first time the app is opened on a phone, and then the user is prompted to create an account.

Walkthrough

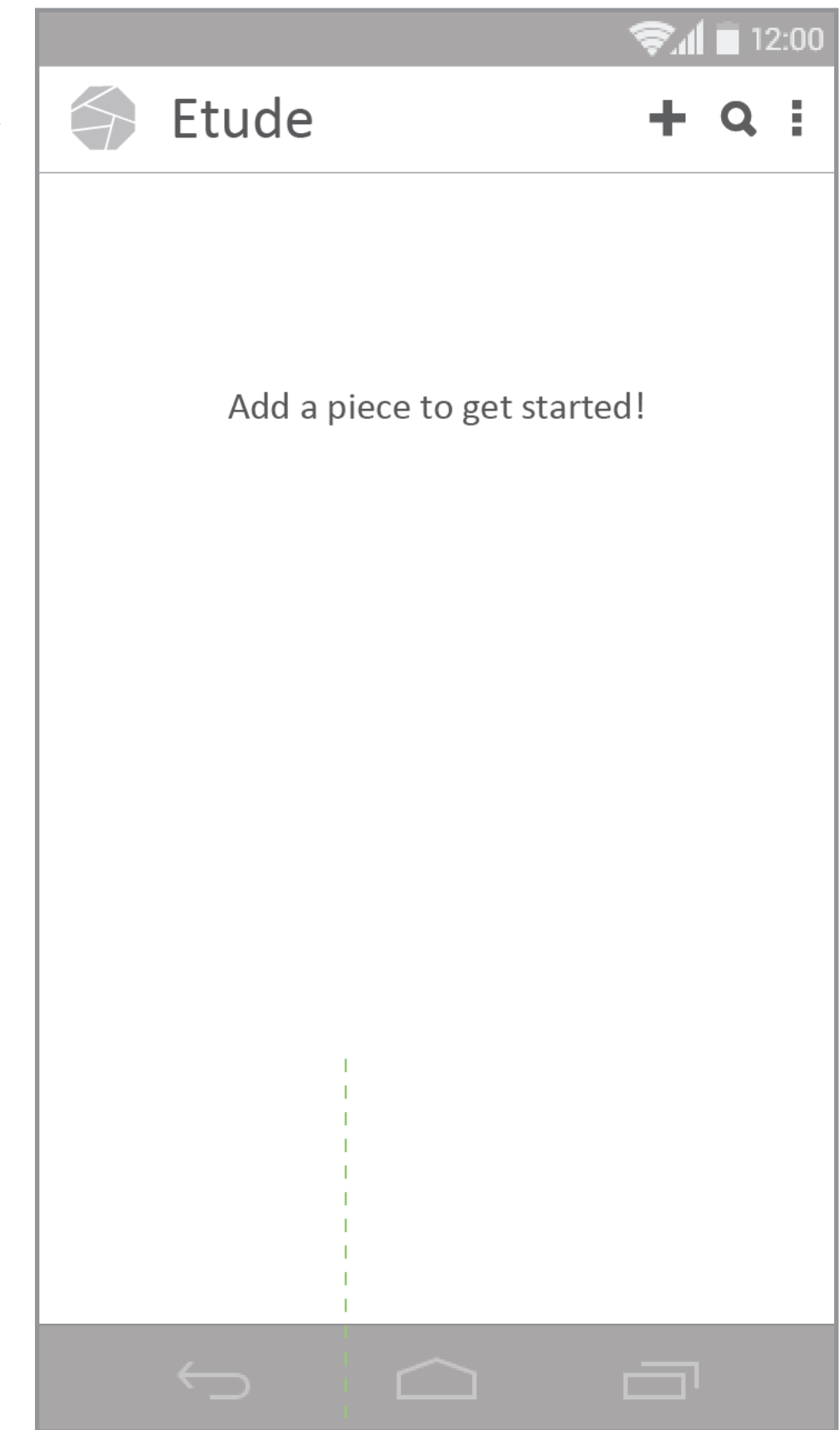


The walkthrough covers the Music Log, the practice tools, and the three analysis sections.

Create Account



Music Log: First Time User



The app tells the user to add a piece whenever the Music Log is empty.

Music Log

The Music Log contains all of the pieces that the user has added to their repertoire in Etude.

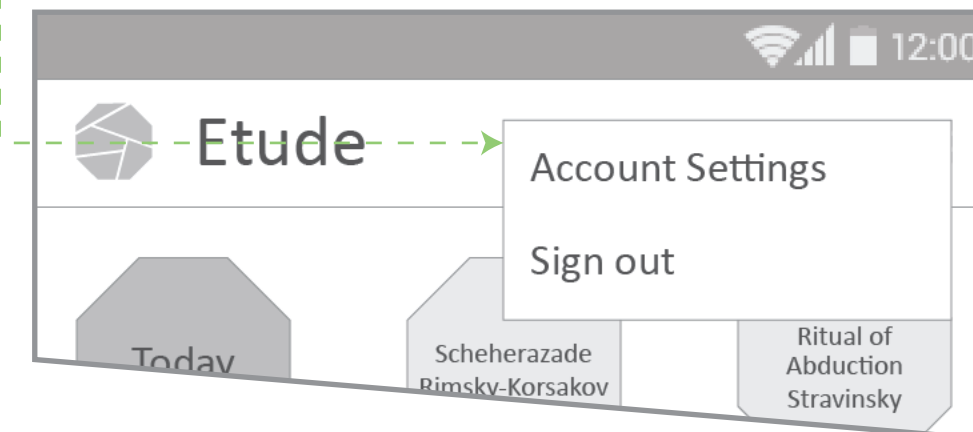
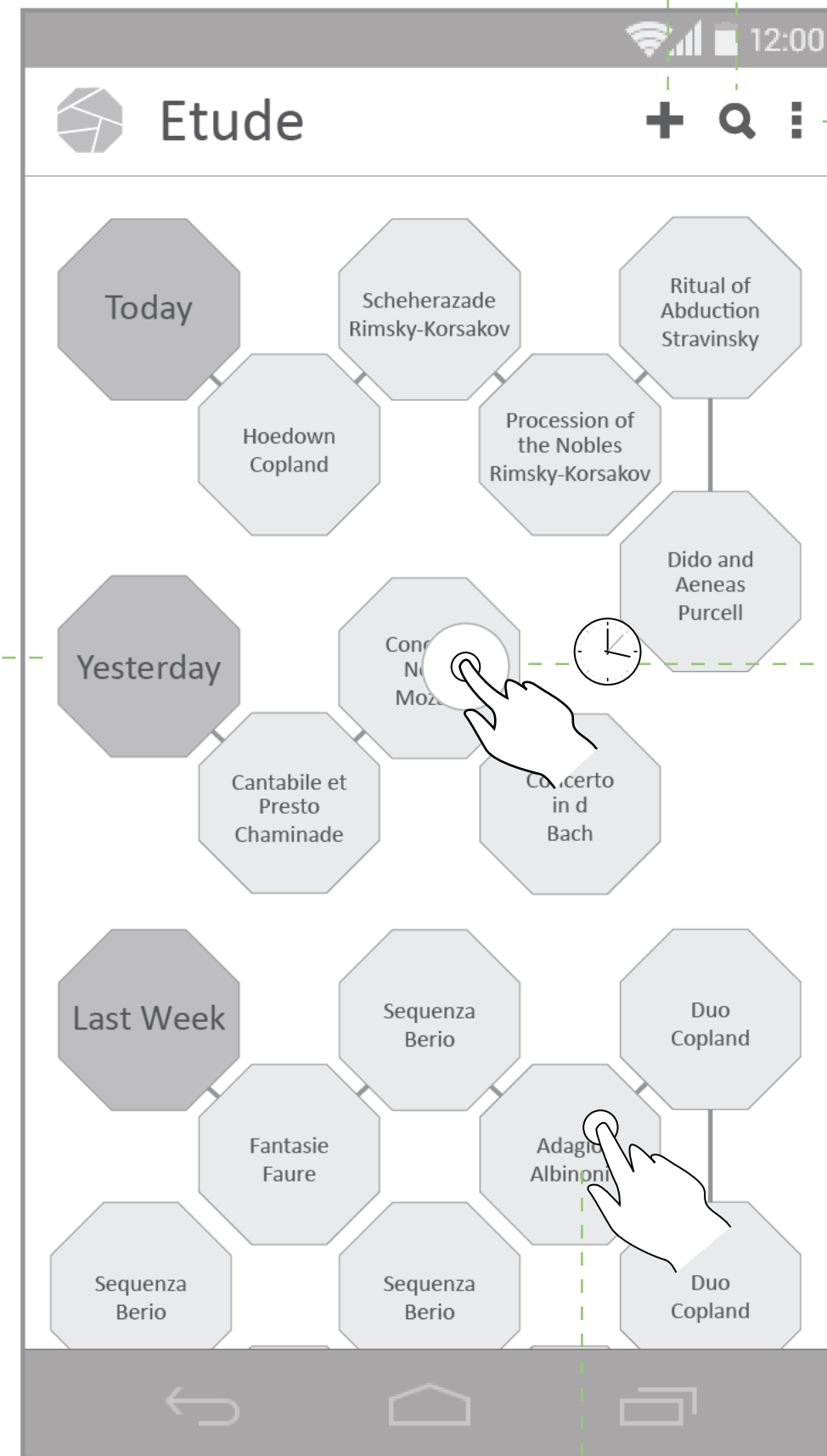
Tapping this will start the New Song process.

Tapping this will search the Music Log by title or composer.

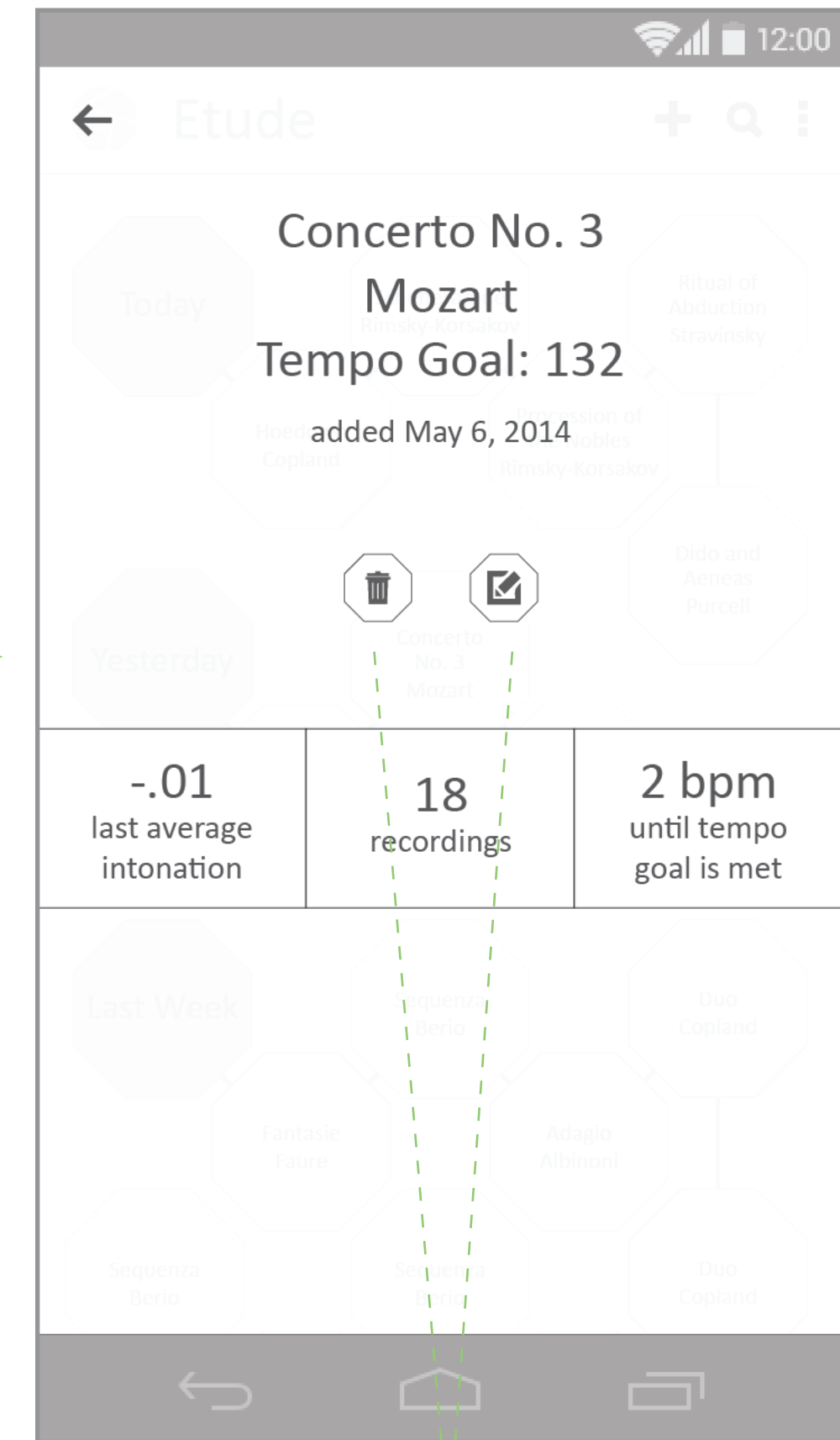
Tapping this will open up the settings menu.

Music Log

Settings Menu



Piece Tile Press and Hold



Song tiles are arranged in chronological order, according to the line connecting the pieces.

A single tap will open a song.

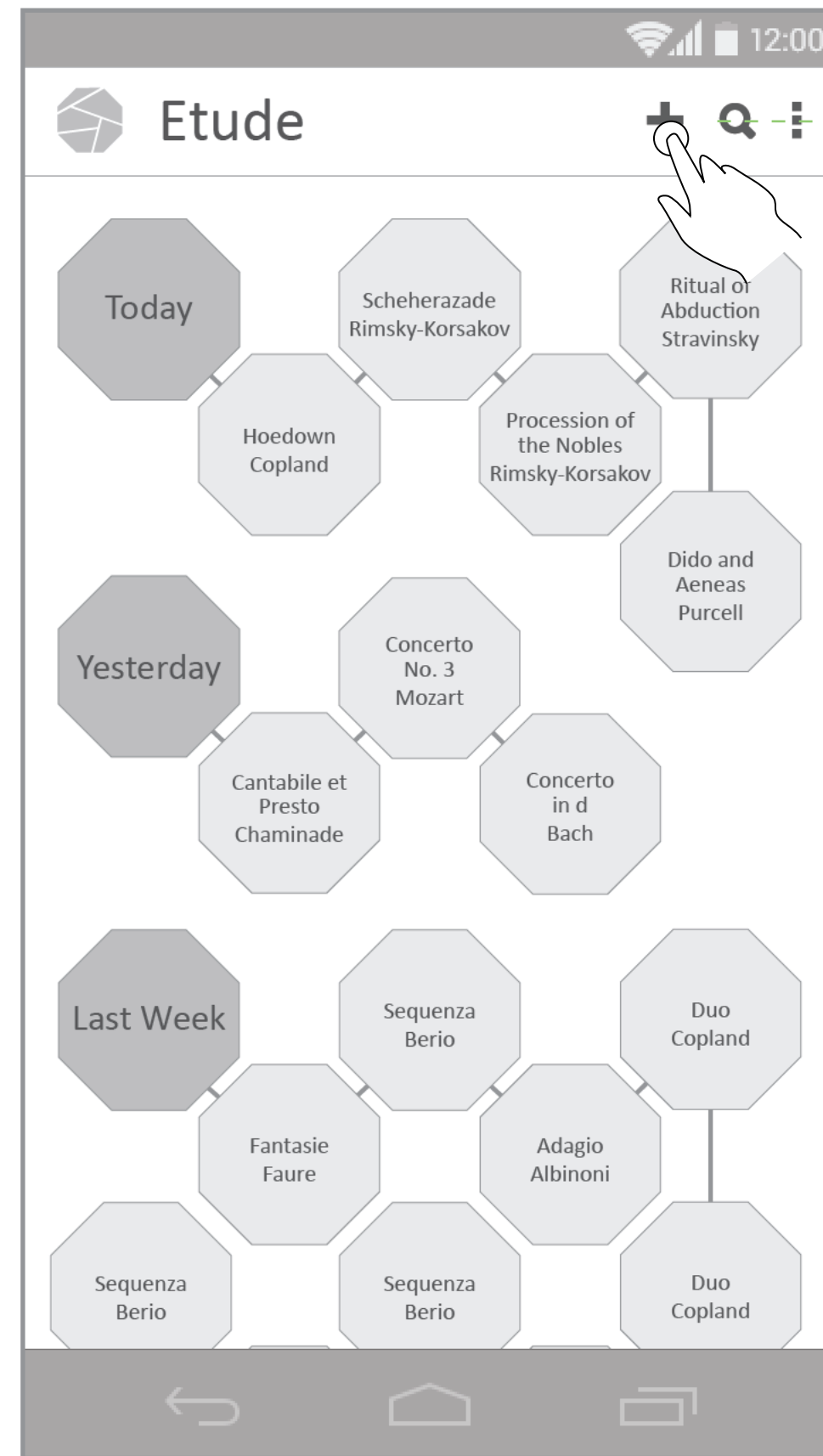
Users can edit or delete the Song from this screen.

New Piece

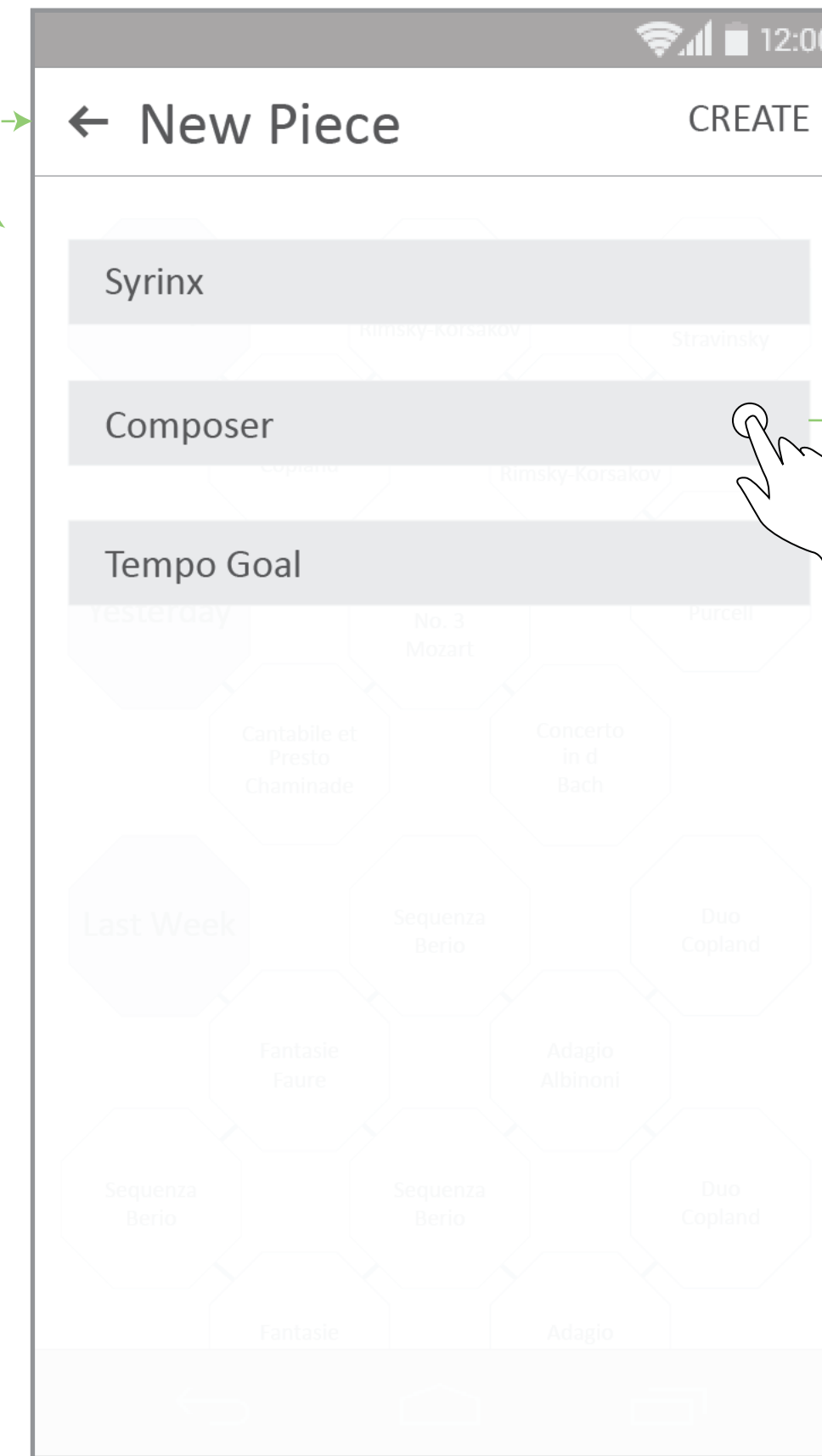
To add a Piece to their Music Log, the user clicks the add button in the primary navigation bar.

Canceling will return the user to the Music Log. Saving will take the user to the new Piece details.

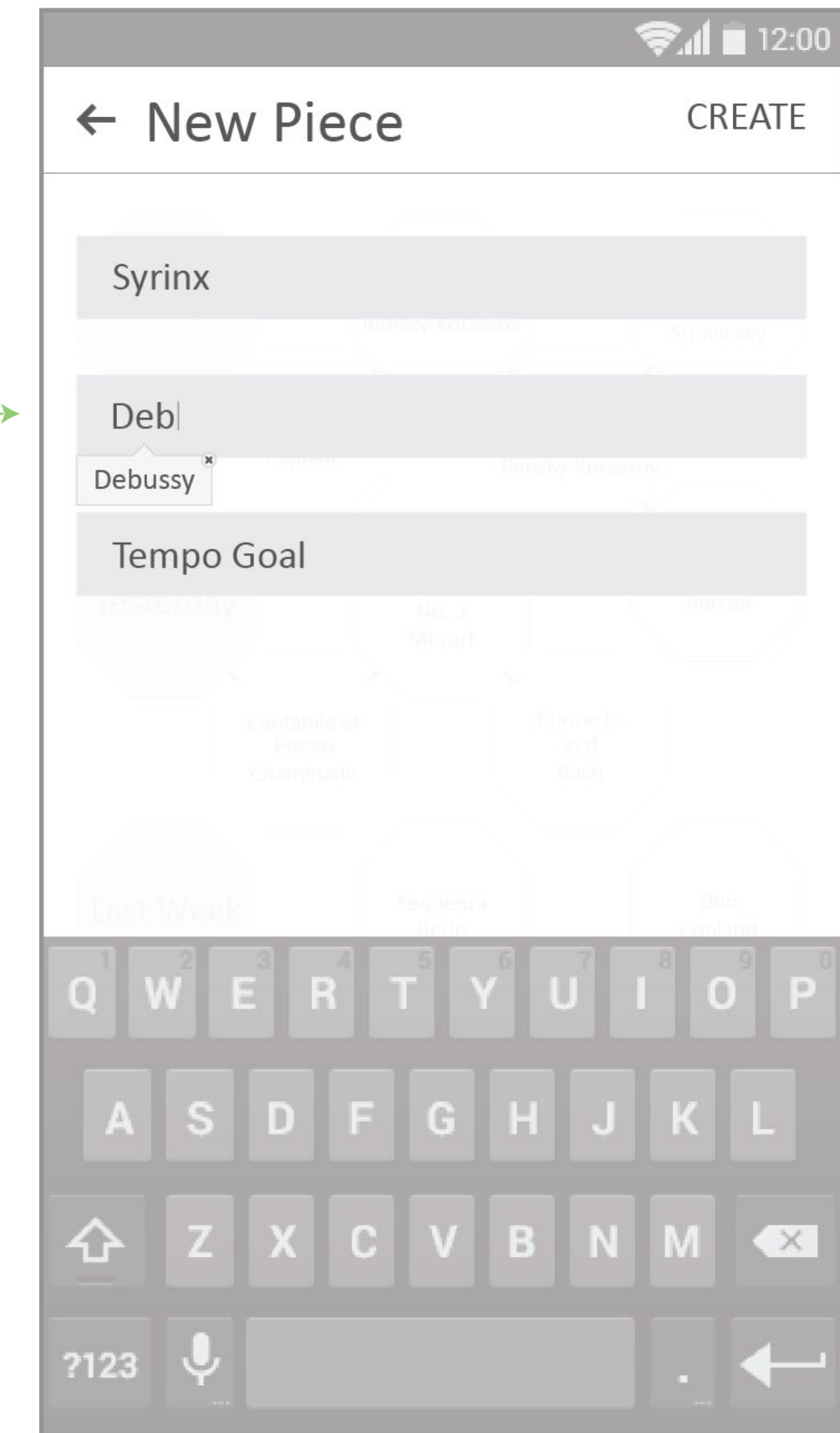
Music Log



New Piece



New Piece - Typing



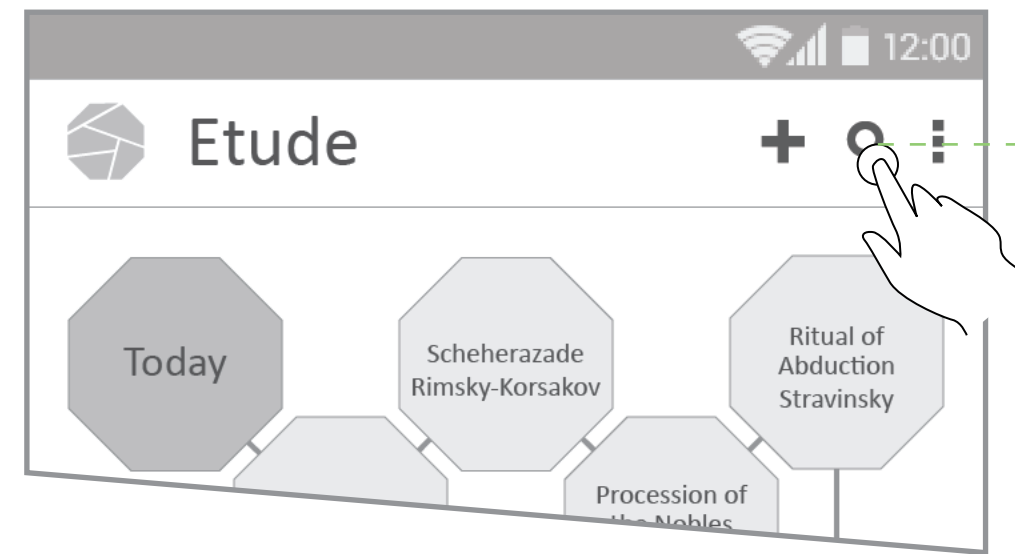
Slides up from the bottom of the screen.

Search

To search, a user clicks the search icon in the primary navigation bar.

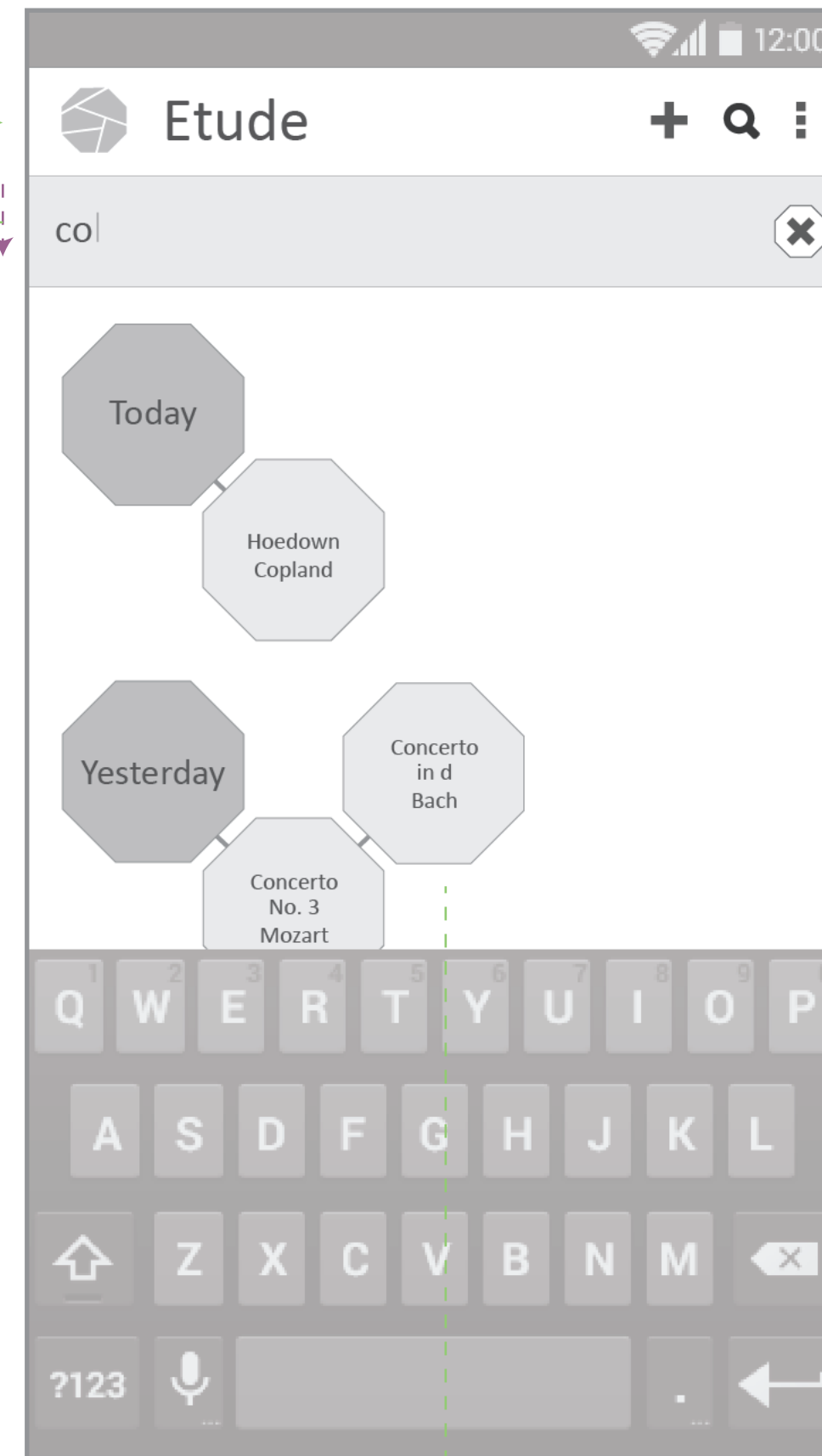
Search terms apply to both title and composer.

Music Log



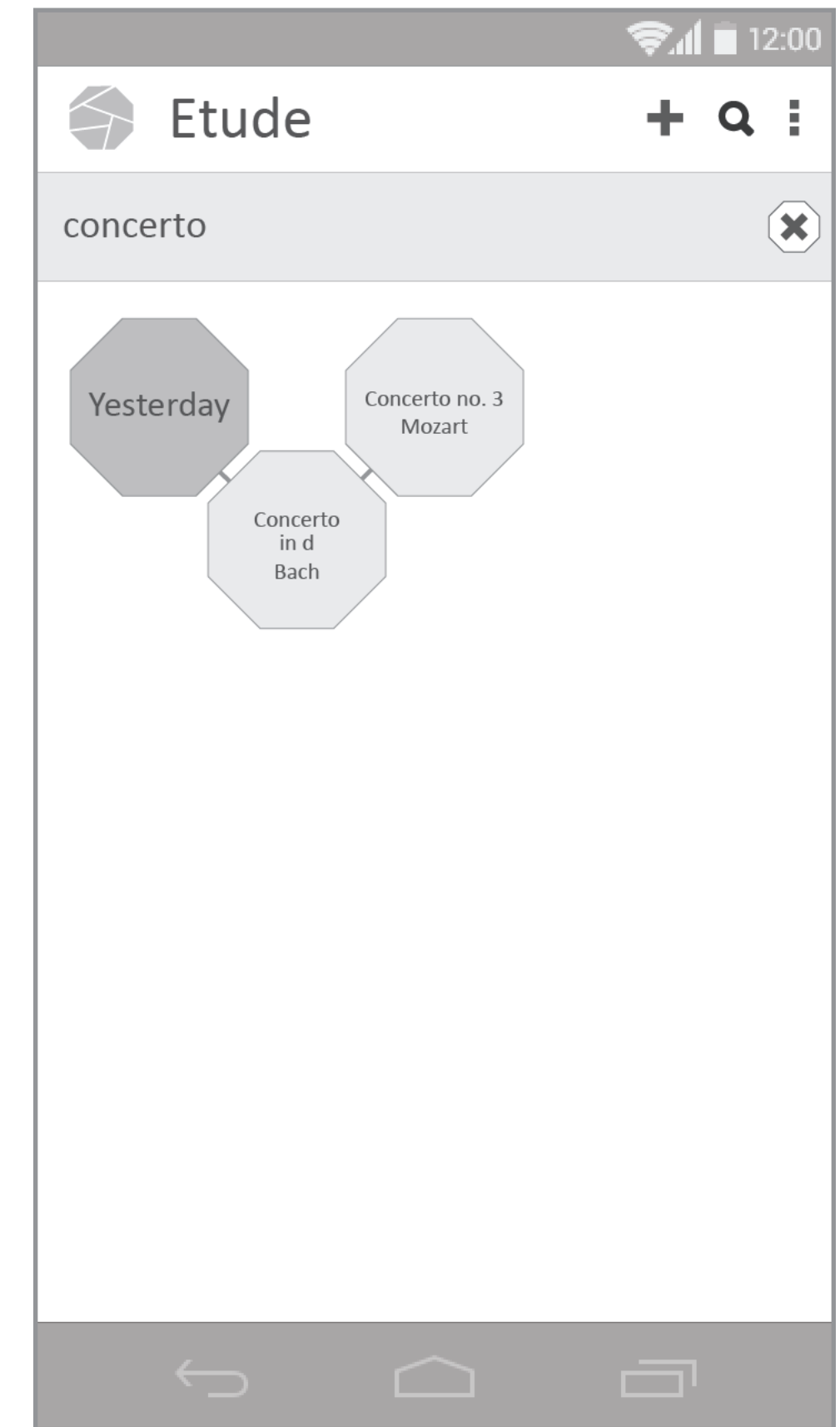
Search bar slides down from under the navigation bar with an overlay on the Music Log.

Search Typing



Search terms modify the Music Log view and may be cancelled at any time.

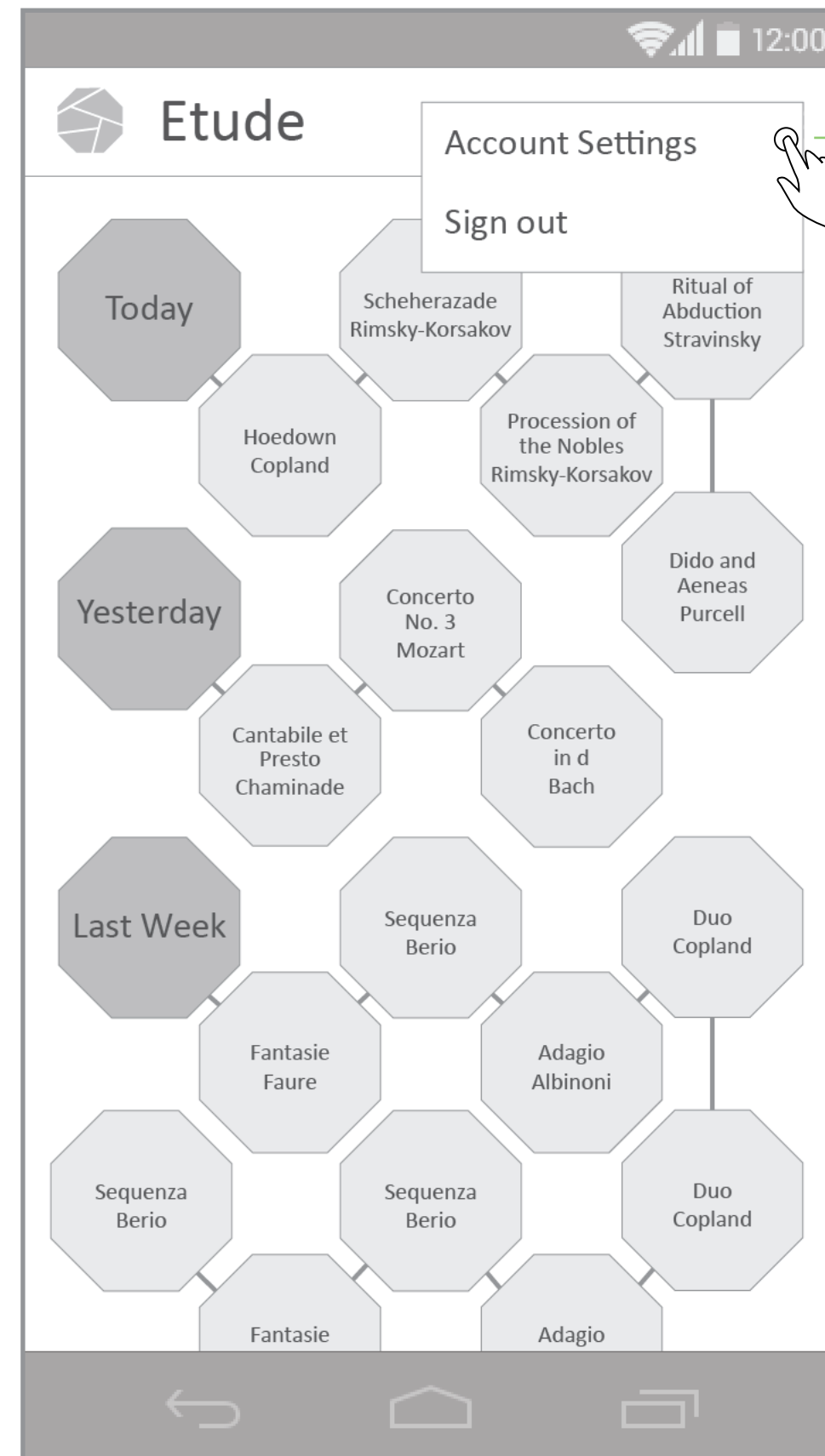
Search Results



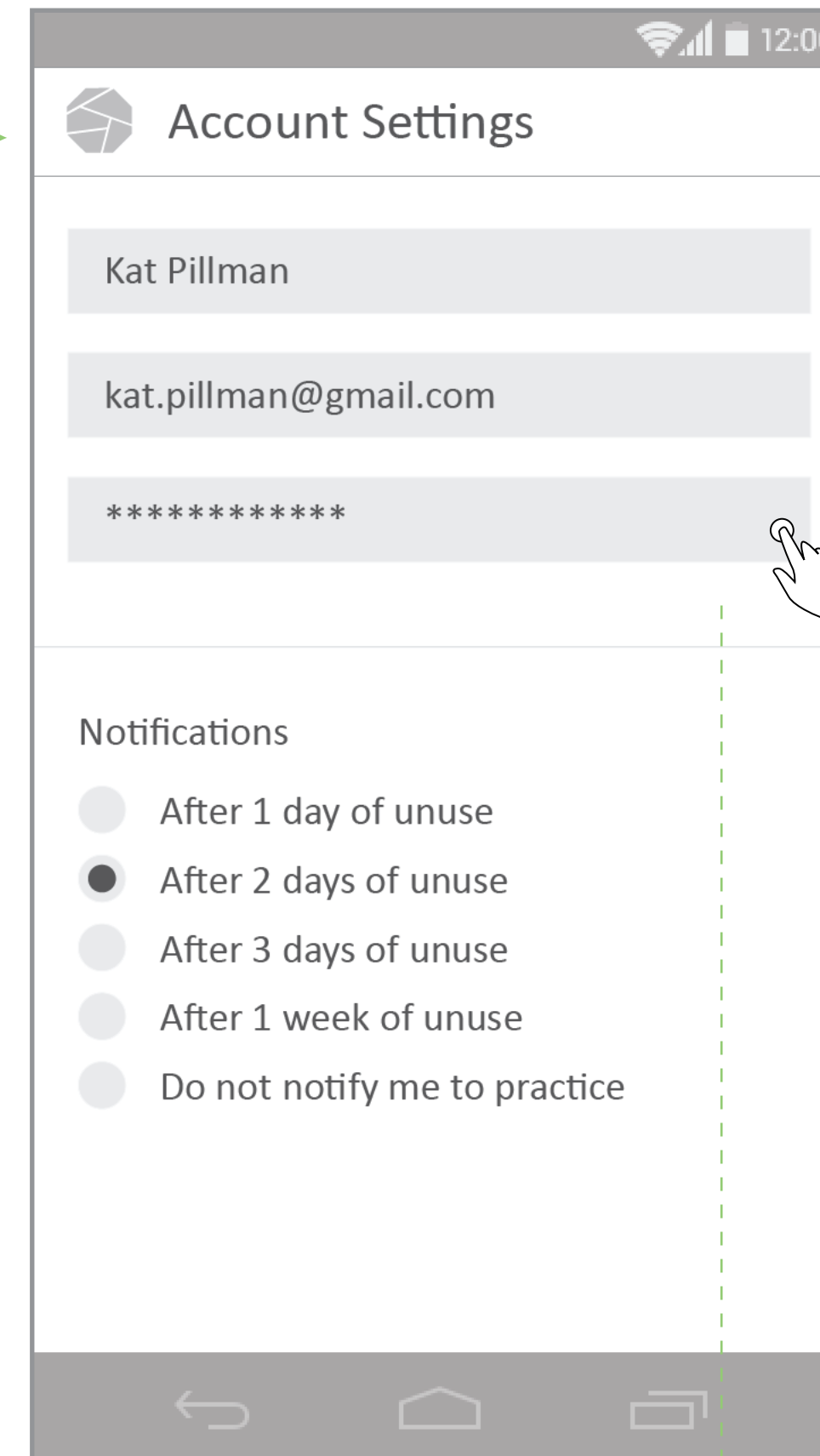
Account Settings

Account settings include email, name, password, and practice notifications.

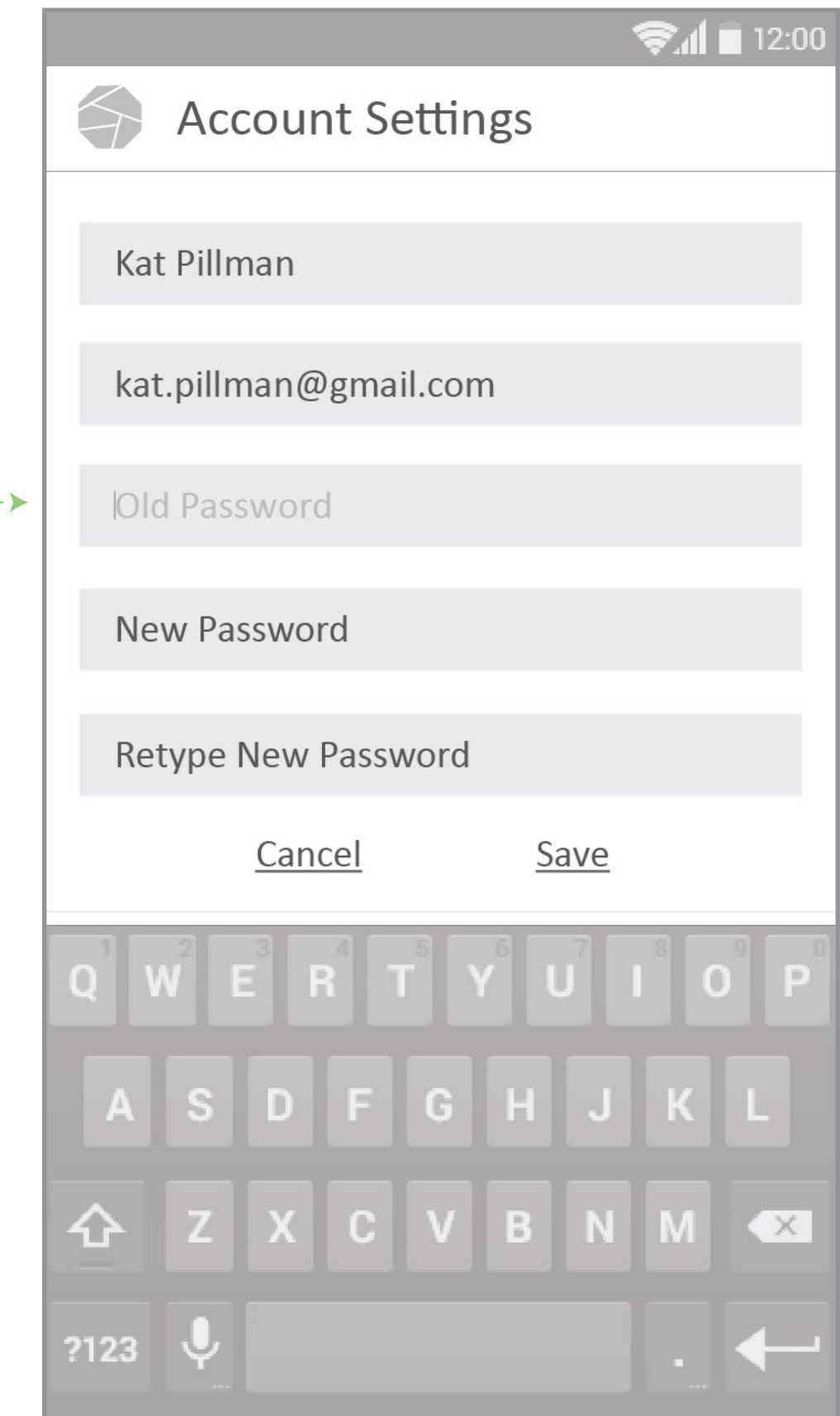
Music Log - Menu



Account Settings



Account Settings - Edit

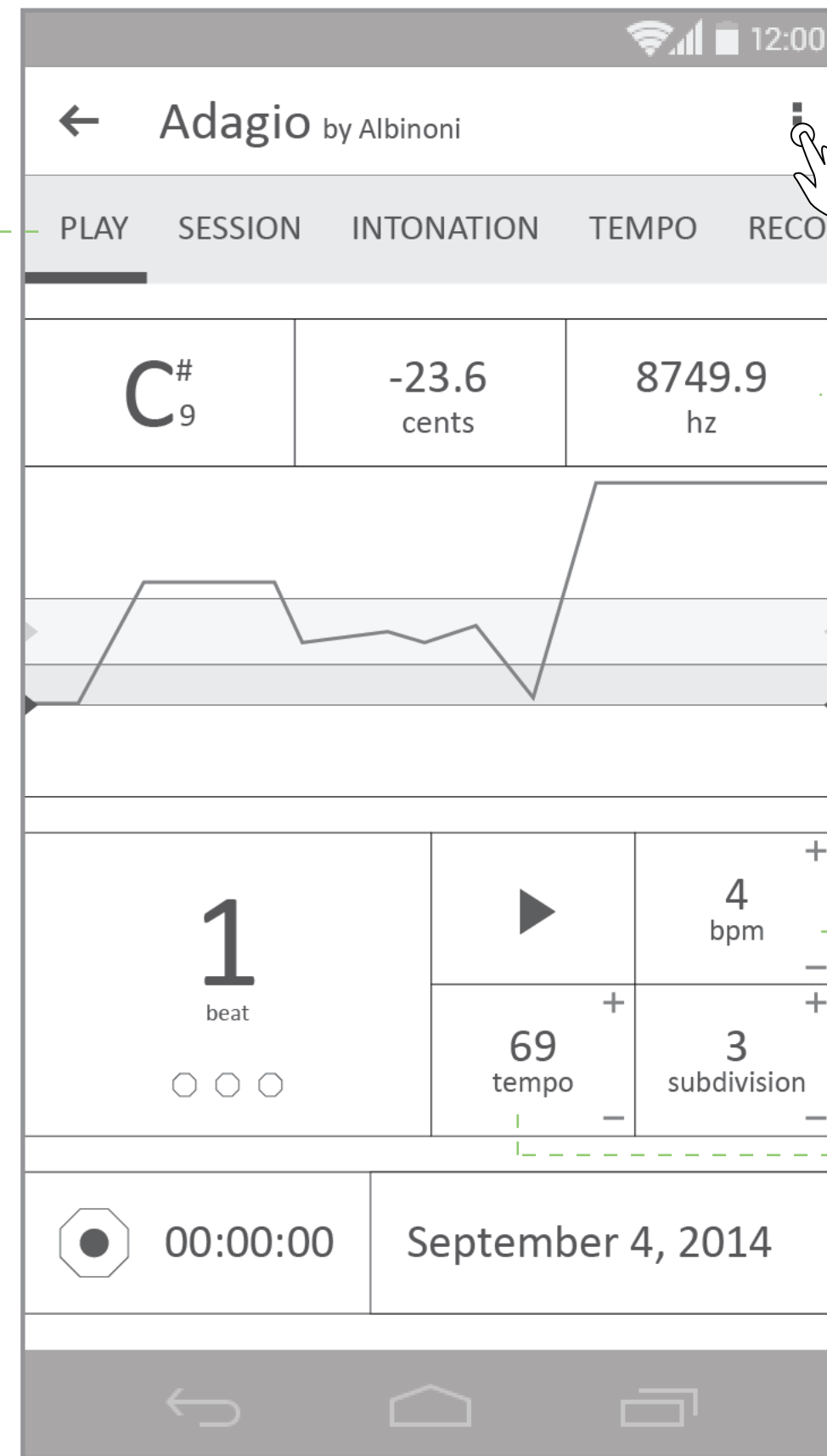


To edit an area, the user clicks on it and can save the changes by pressing the confirm button.

Piece: Play

Play is the data collection part of this app and features helpful practice tools for musicians.

Piece: Play



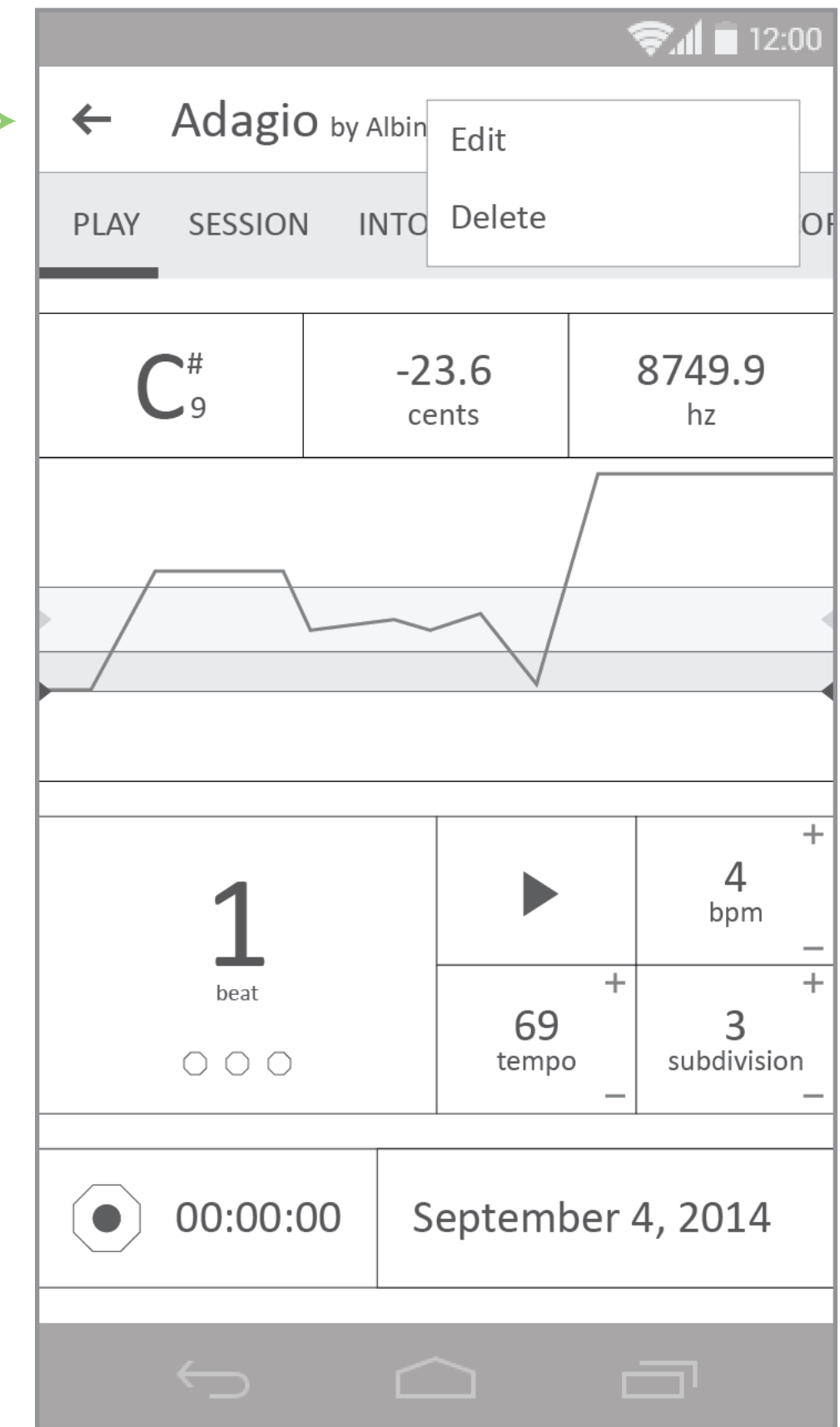
The tuner automatically runs when the tab is open.

Tempo, beats per measure, and the beat subdivisions are adjusted by tapping the top or bottom of each button.

Tempo can also be increased by scrubbing a finger up and down.

Whenever this tab is open, the app is listening for intonation and tempo data to analyze.

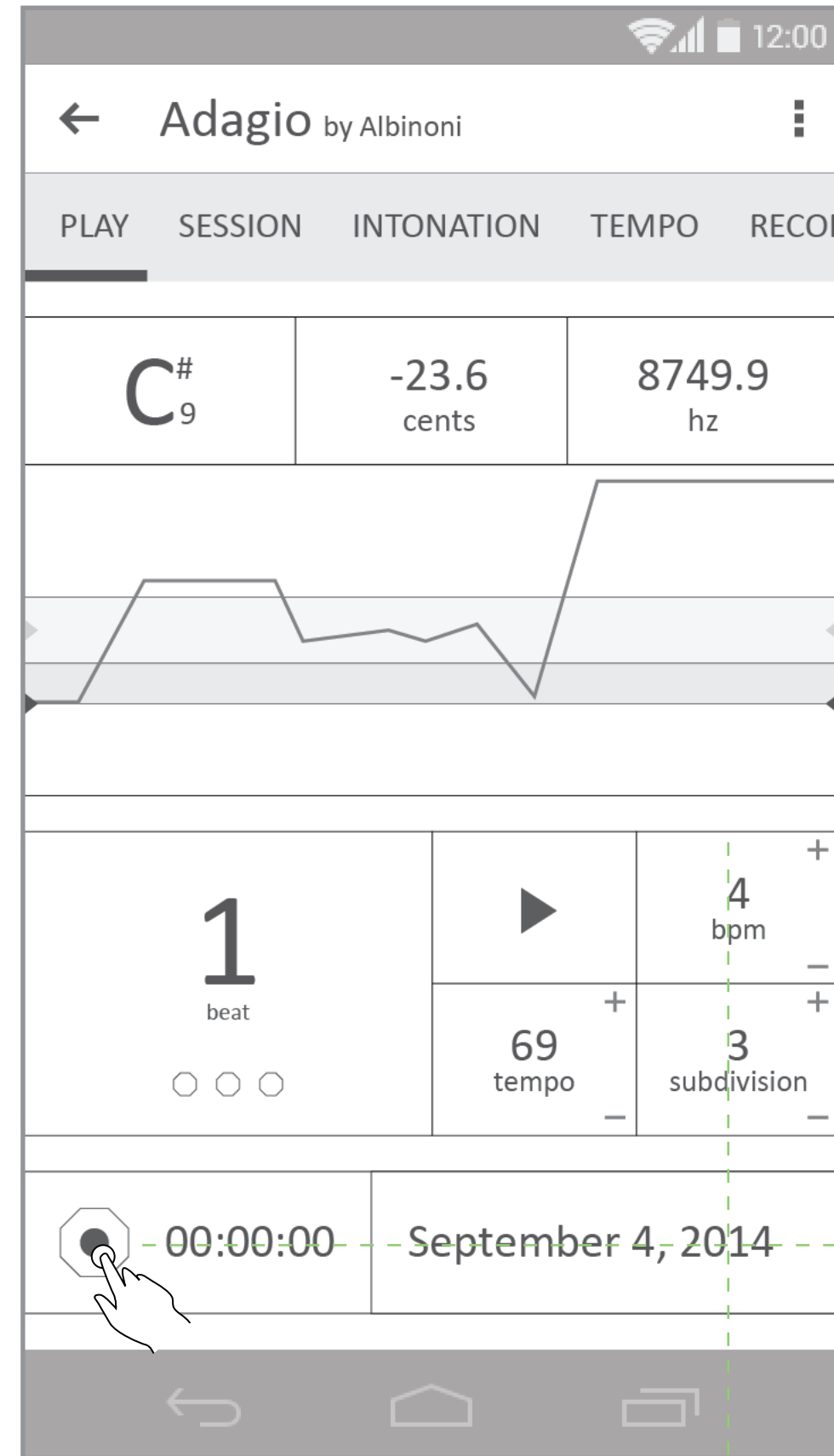
Piece: Play - Piece Settings



Piece: Play

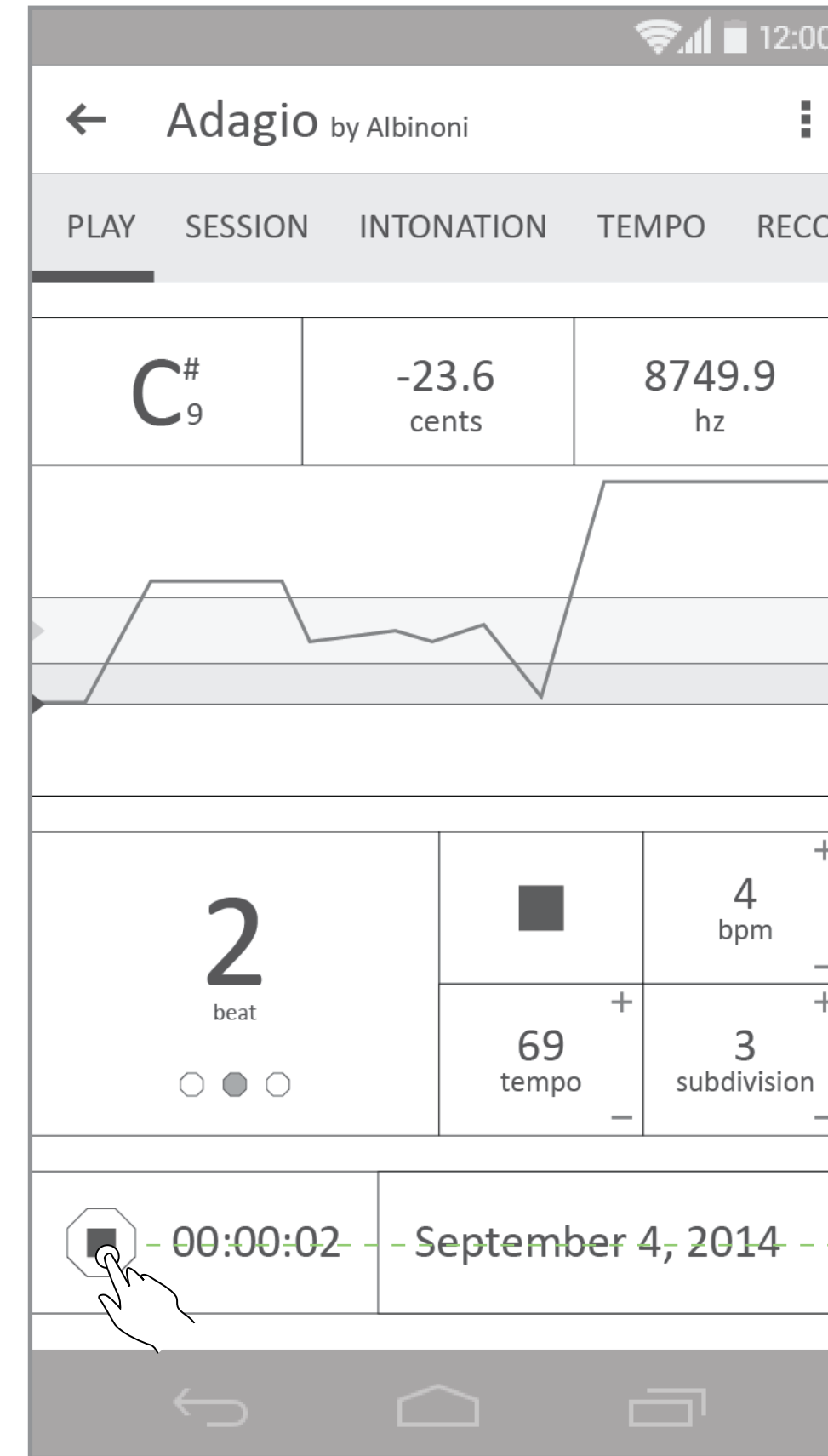
In the Play tab, musicians can record as much or as little of their practice time as they like.

Piece: Play

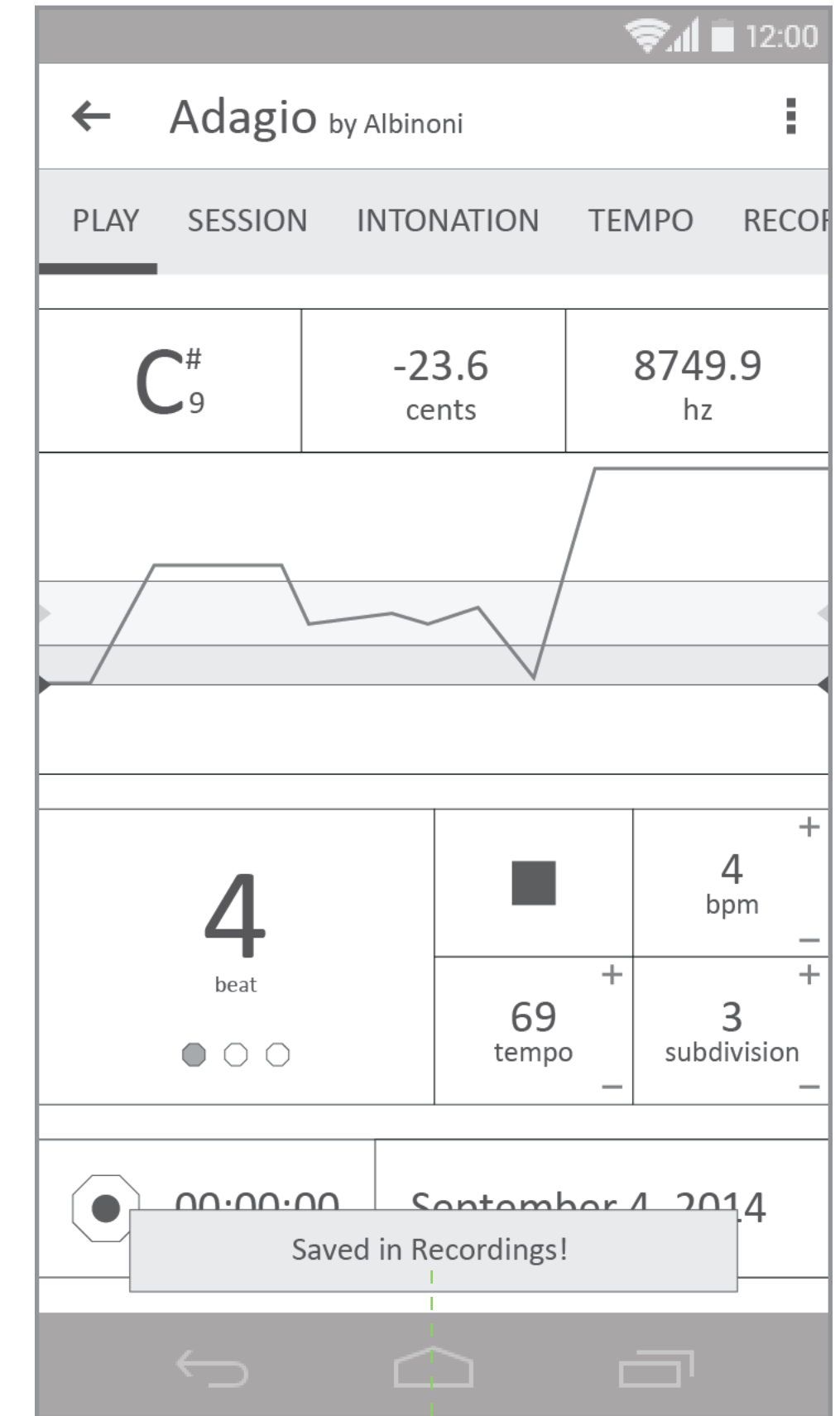


When the metronome is silenced, it will give a visual indication of the beat.

Piece: Play - Recording



Piece: Play - Recording Saved



When the Stop button is pressed, the recording is automatically saved in the Recordings tab.

Piece: Session, Intonation & Tempo

Piece: Session
 Slowest, Average, and Fastest tempo markings are compared against the Goal tempo. Average intonation for each note is compared against the average intonation for the practice session, and there is a gradient to show the best versus the worst intonation.

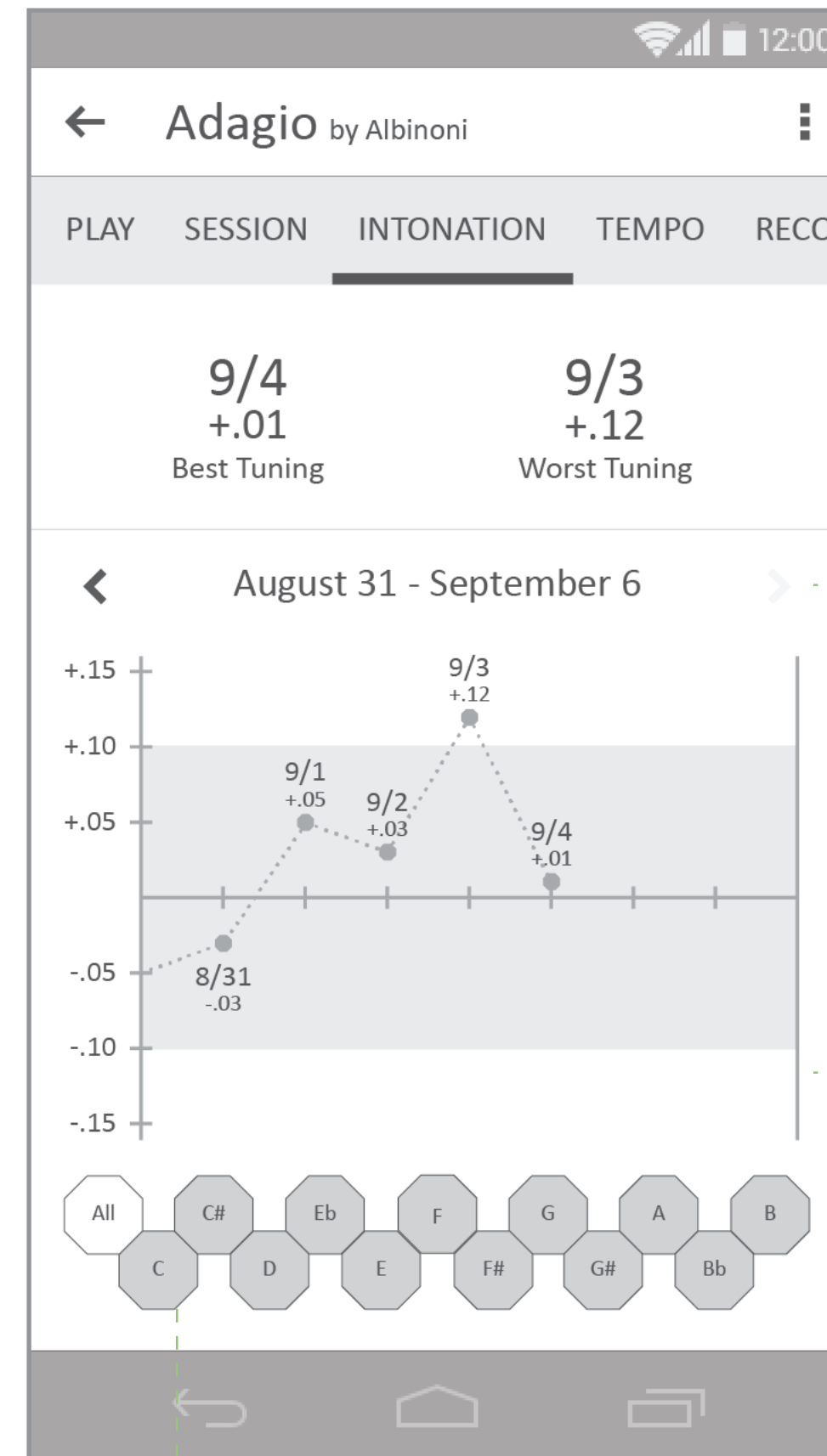
Piece: Intonation & Song: Tempo
 The intonation and tempo graphs display chronological improvement.

Piece: Session



The most recent session is shown by default, but users can tap right and left to change the date and see data for more practice sessions.

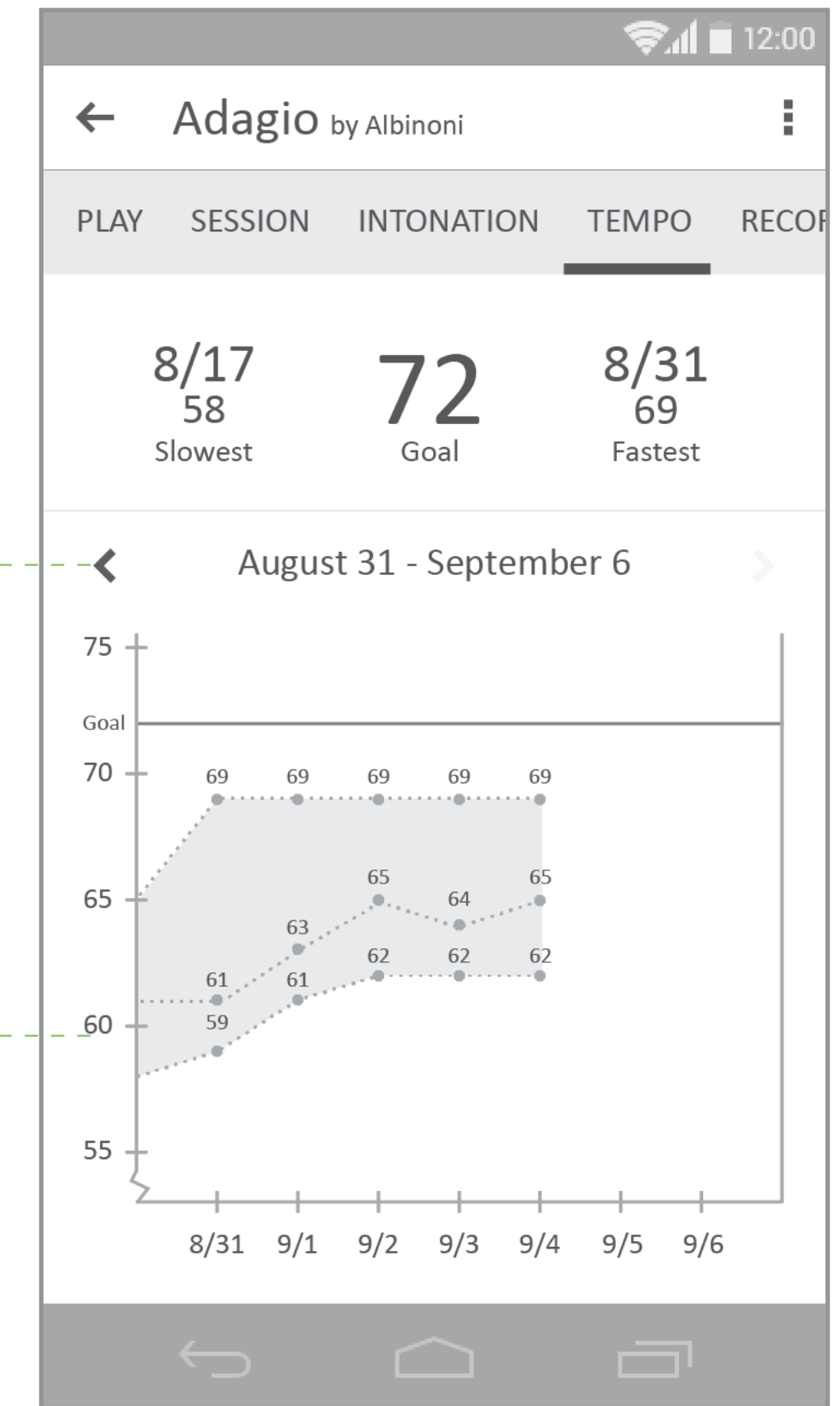
Piece: Intonation



Users can filter by note, so they can see data analyzed and averaged from a single note or from all the notes played during a session.

One week is shown at a time.
 Users click right and left to navigate between weeks.

Piece: Tempo



The graph updates the Y-axis to comfortably show intonation and tempo extremes.

Piece: Recordings & Replay

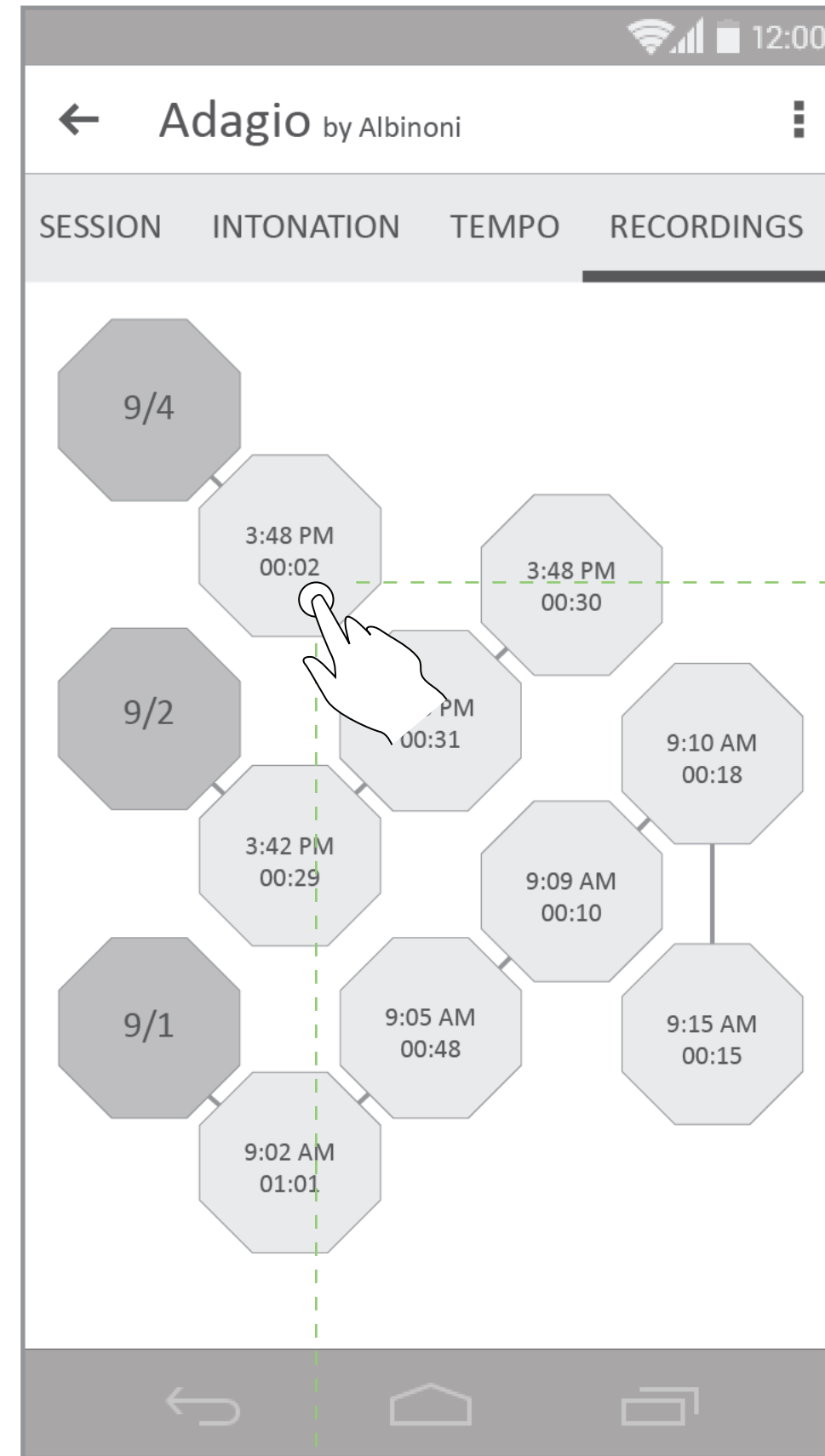
Piece: Recordings

Recordings lists all recordings for the piece in a chronological list format as seen in the Music Log.

Piece: Recordings - Replay 1

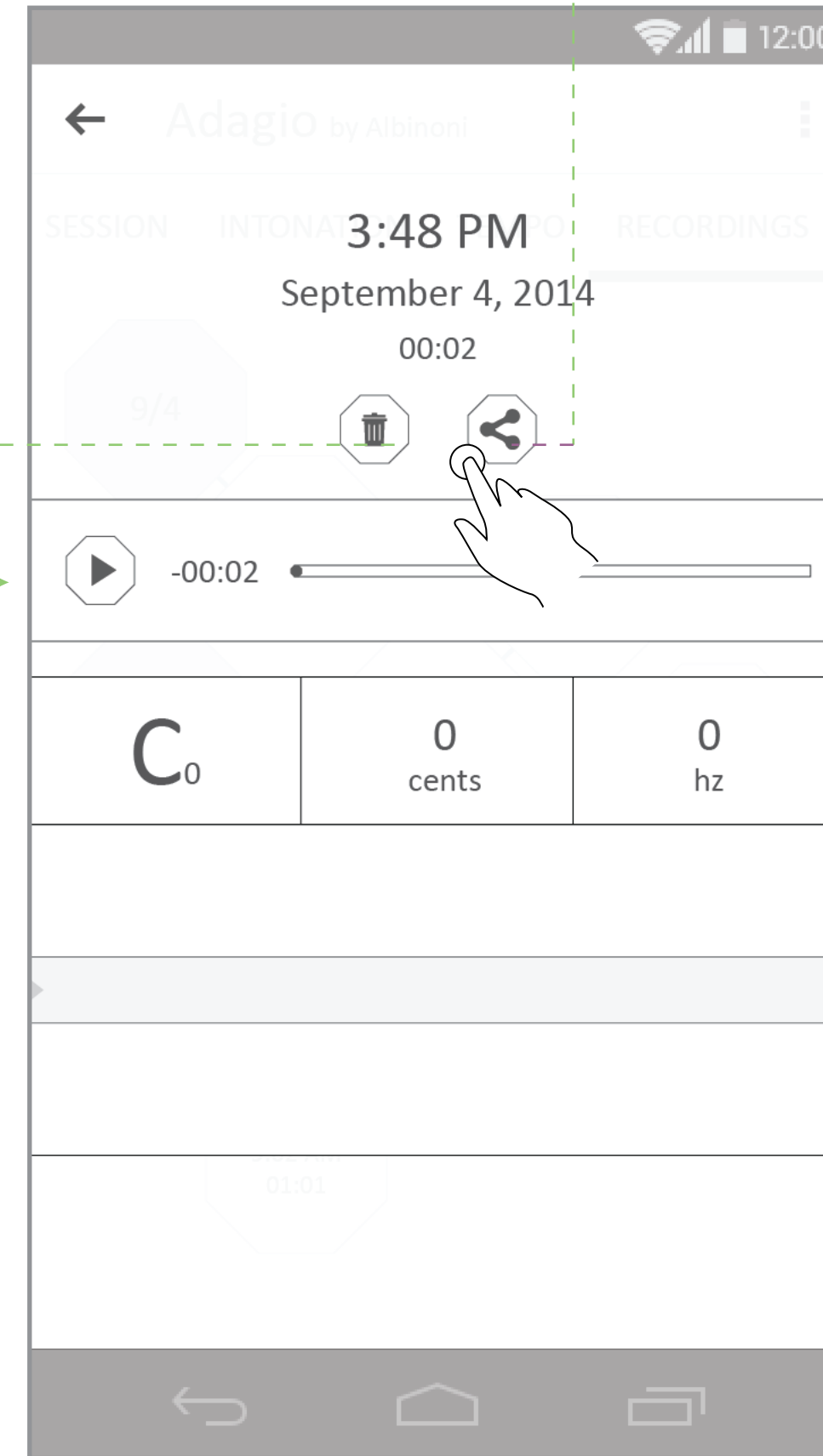
The replay screen pops up over the Recordings screen, giving the options to delete, play, or share the recording.

Piece: Recordings



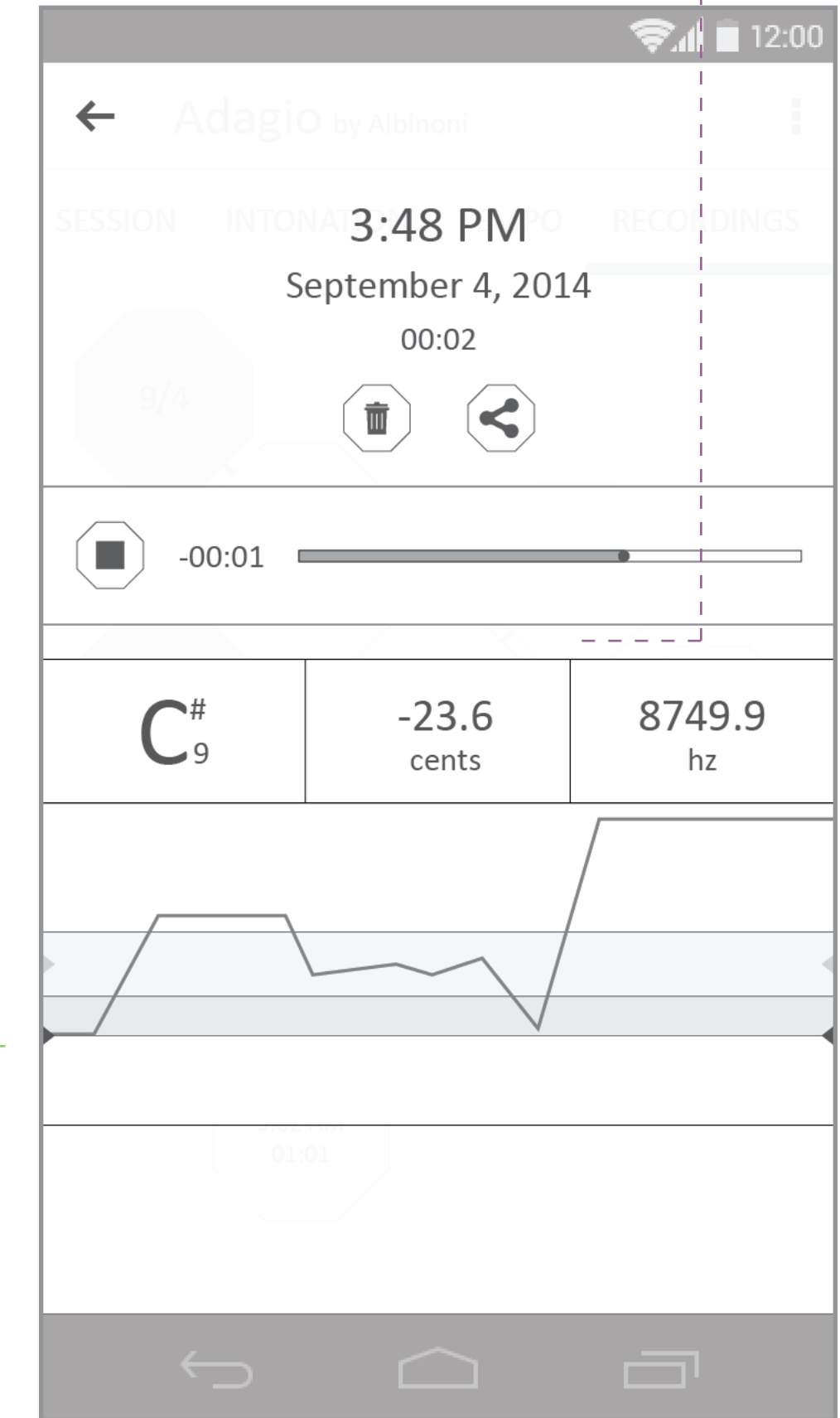
Like in the Music Log, to open a recording, the user taps it once.

Piece: Recordings - Replay 1



To close the pop up, the user taps the close button or taps elsewhere on the screen.

Piece: Recordings - Replay 2



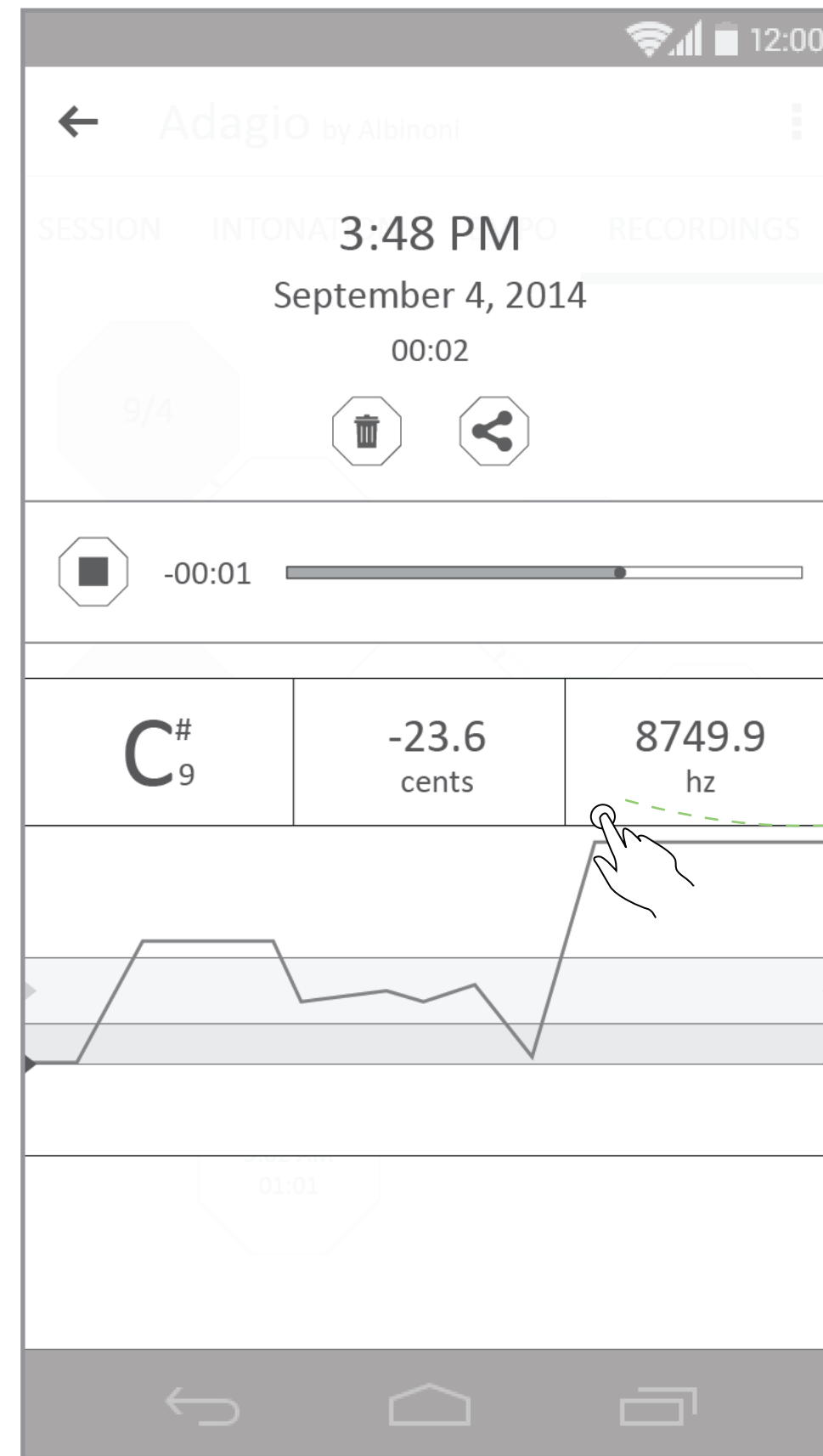
The progress shows on the outer octagon, and the user can scrub through it to rewind or fast forward.

While the recording plays, the tuner gives a demonstration of the intonation in the recording.

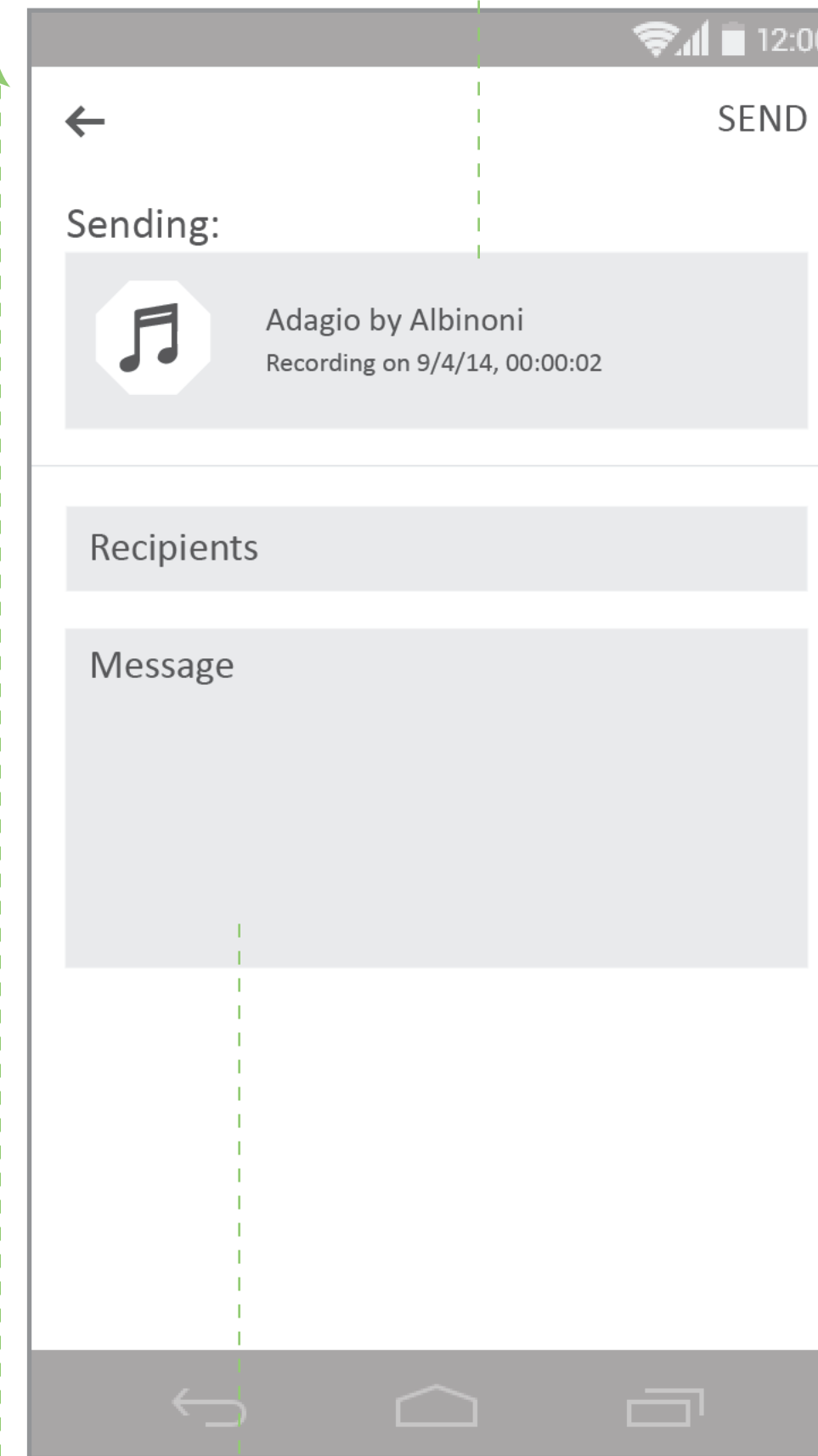
Piece: Share

Users can share recordings with a message through email.

Piece: Record - Replay



Piece: Share



Recordings can be shared through email only.

The cancel button will delete the message and return the user to the Recordings page; the send button will send and return the user back to the Recordings page with a message that confirms the action.

The Share screen confirms which recording the user is sharing.

Preliminary Design Direction

Direction 1: Rustic & Warm

Direction 2: Animated & Lively

Direction 3: Modern & Minimalist

Direction 1 Rustic & Warm

This direction uses wood textures and warm, slightly muted colors to give a mood of peace and quiet while practicing. Graphic elements are layered and weathered. This visual direction is warm and inviting with a dark, saturated background and lighter, more muted elements.

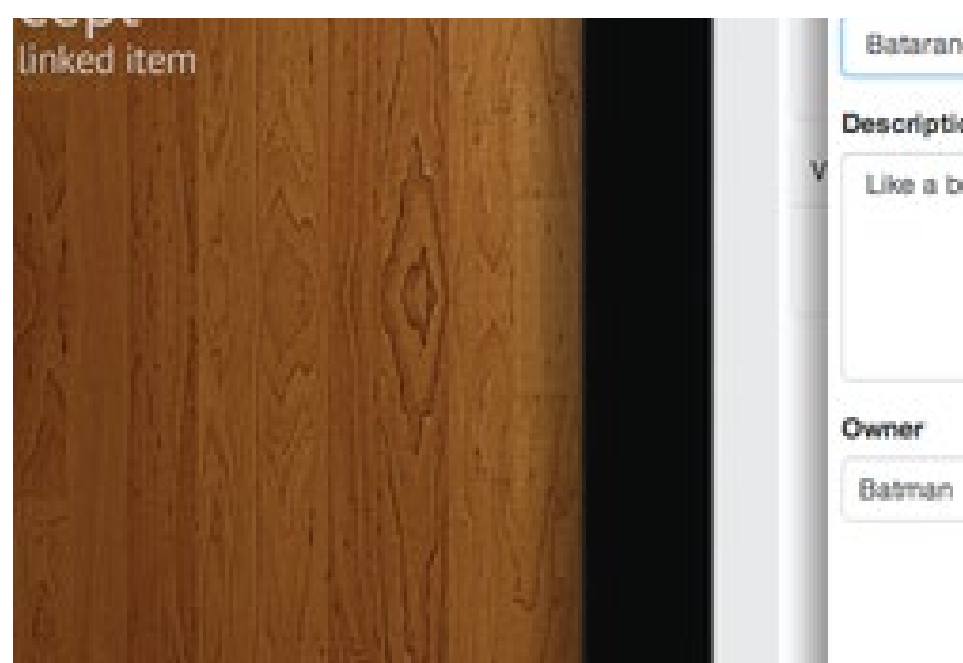
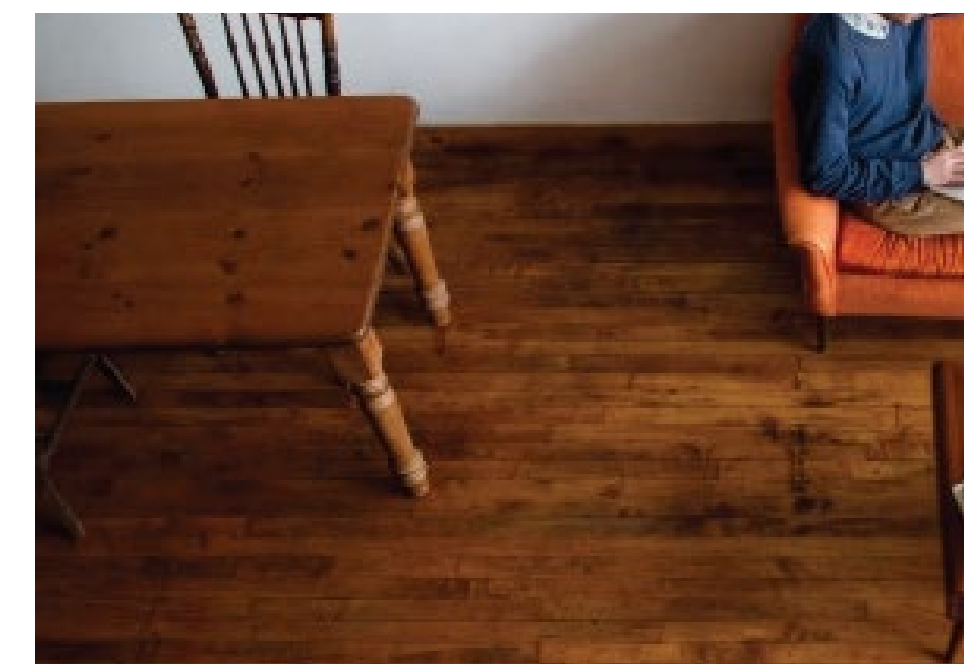
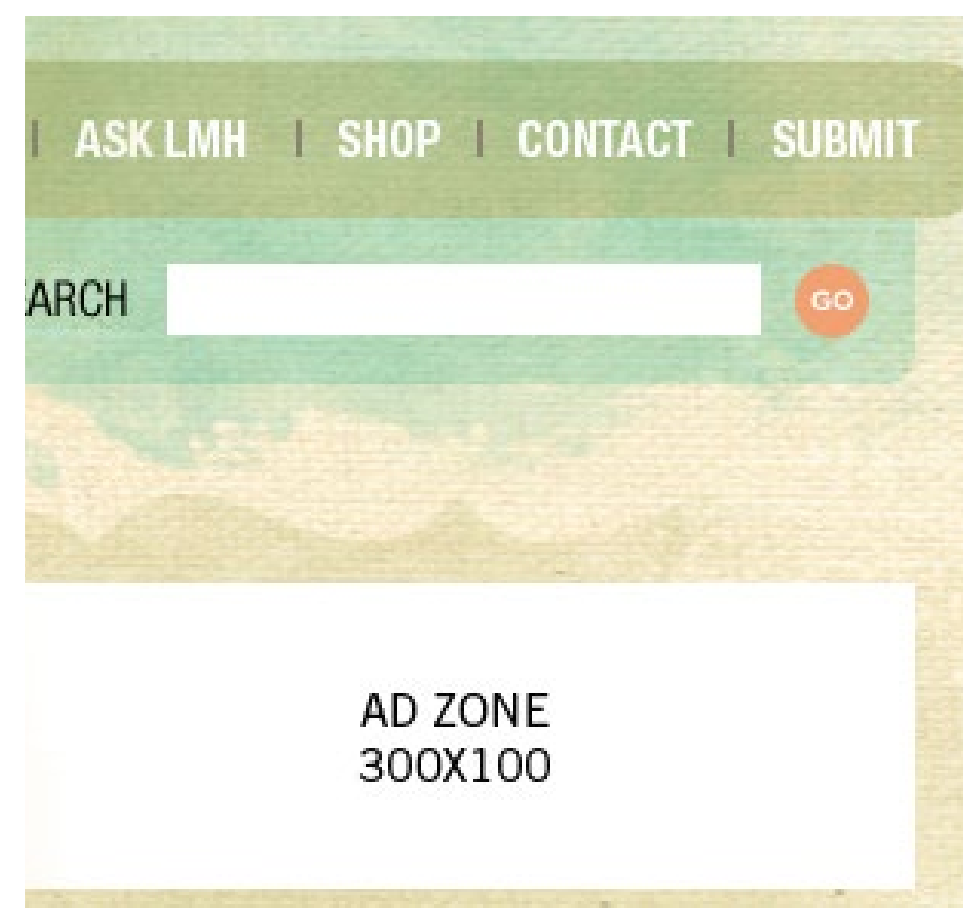
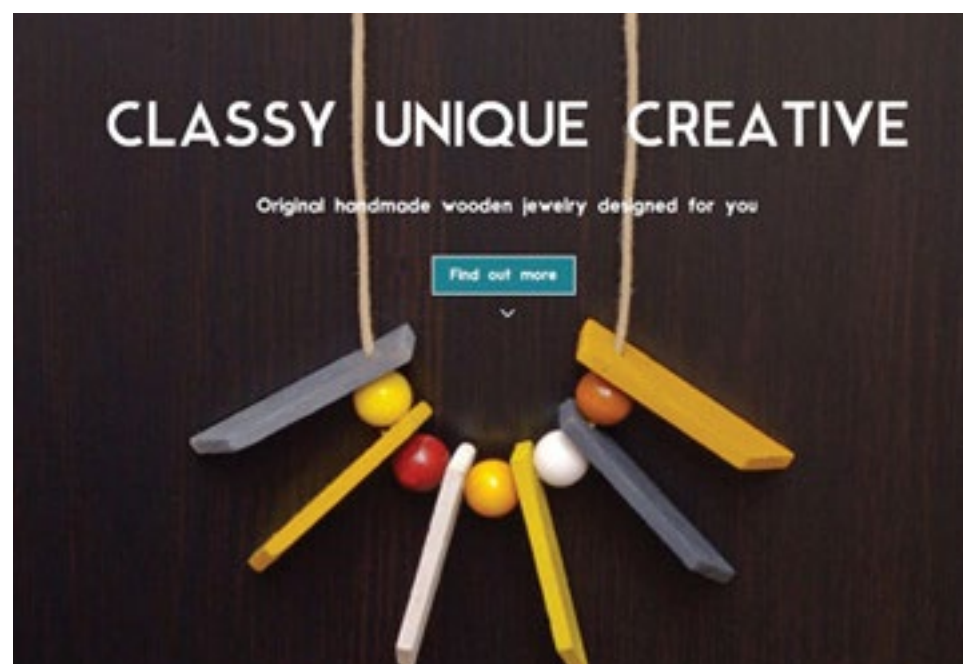
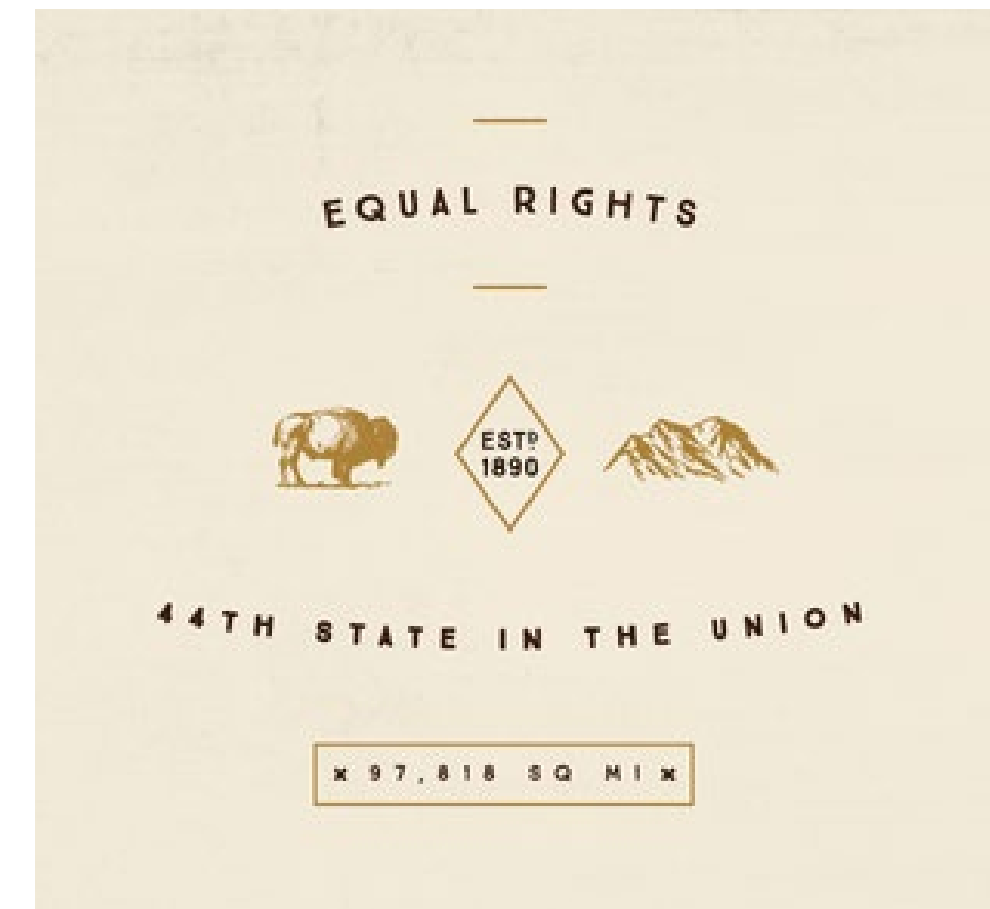
Keywords

Textured

Vintage

Inviting

Cozy



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Keywords

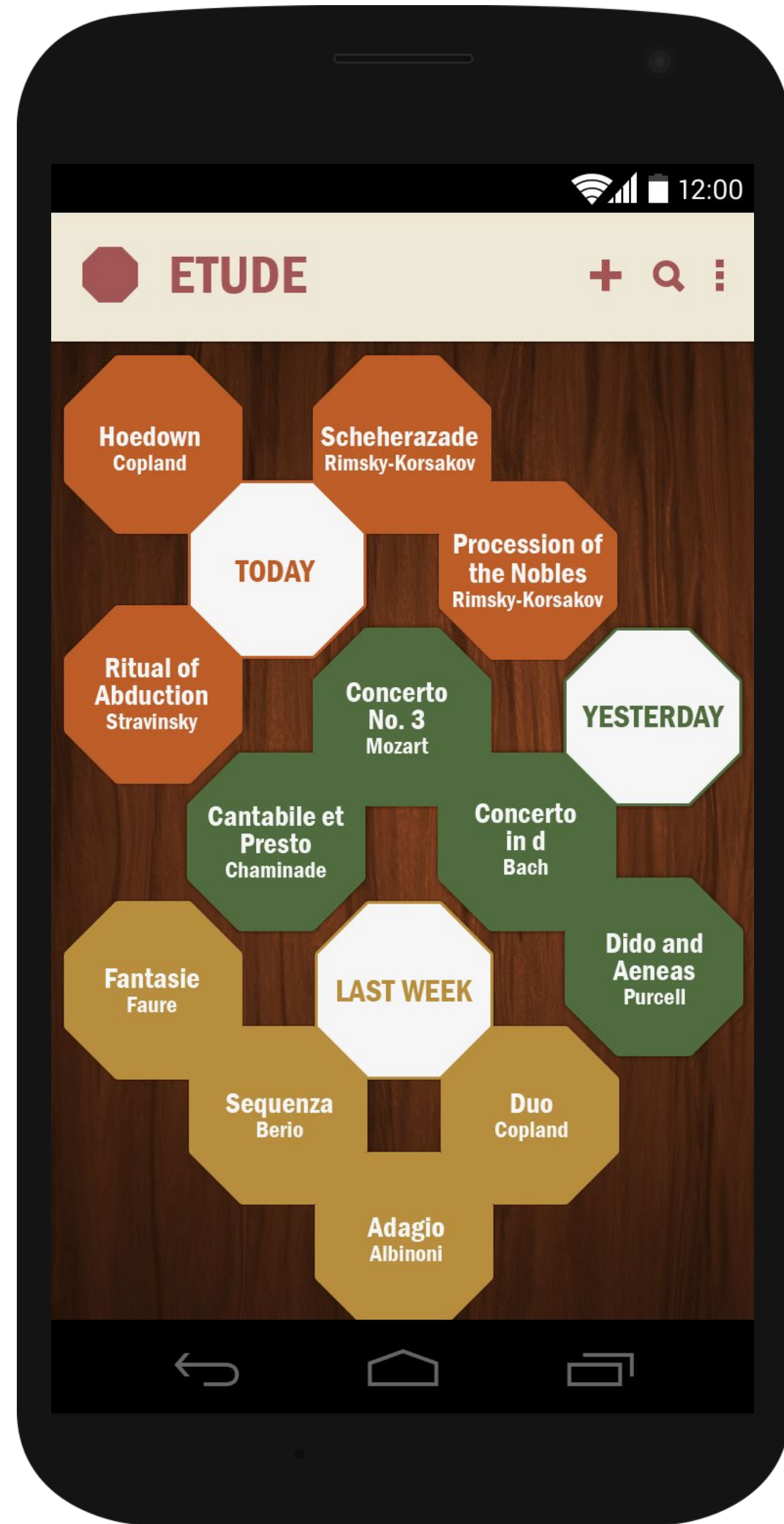
Textured

Vintage

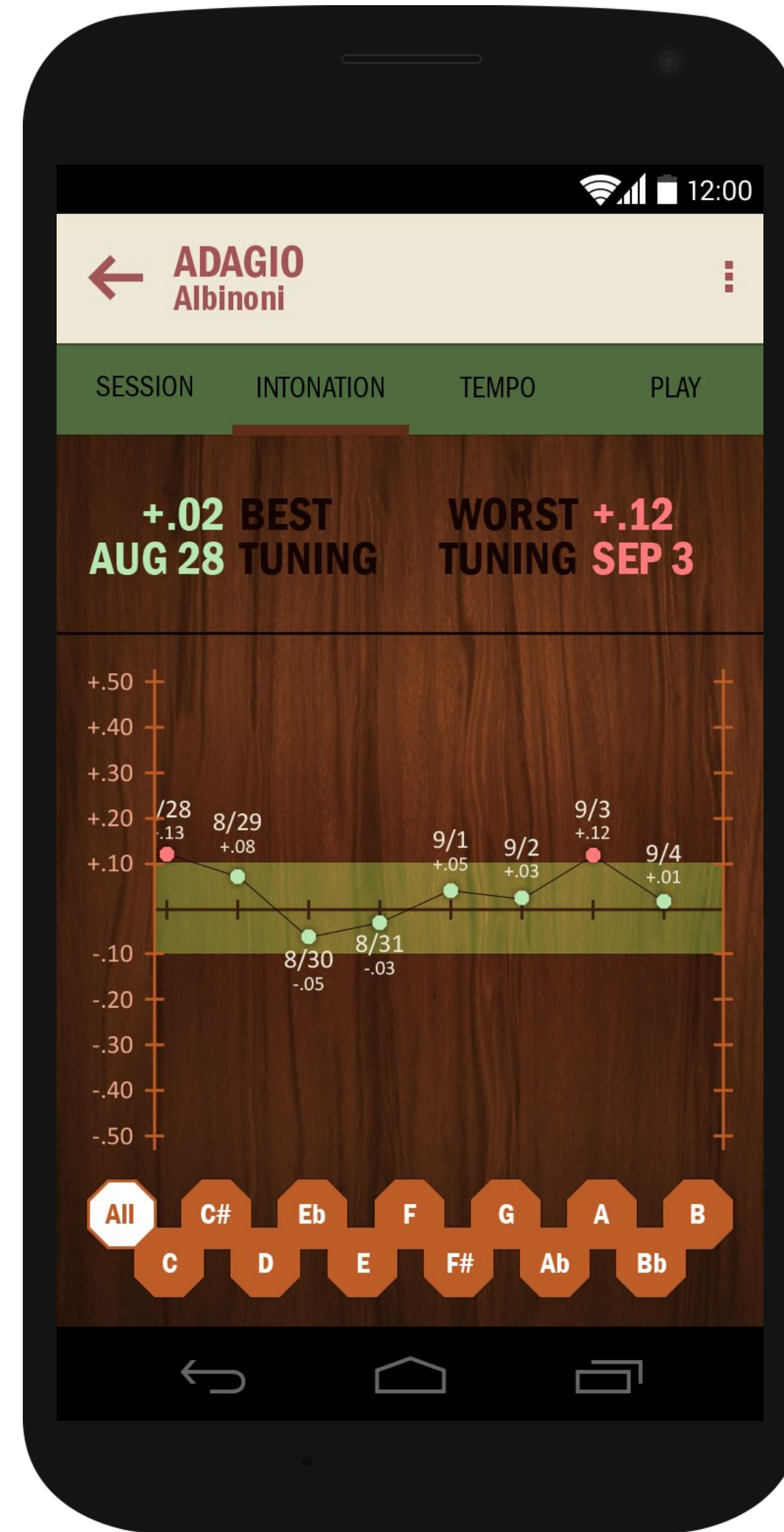
Inviting

Cozy

Music Log



Piece: Intonation



Direction 2 Animated & Lively

This direction uses bright colors to direct attention and create a playful mood. Graphic elements are bright, colorful, and interconnecting. This visual direction is youthful, with a light background and bright, saturated interactive elements.

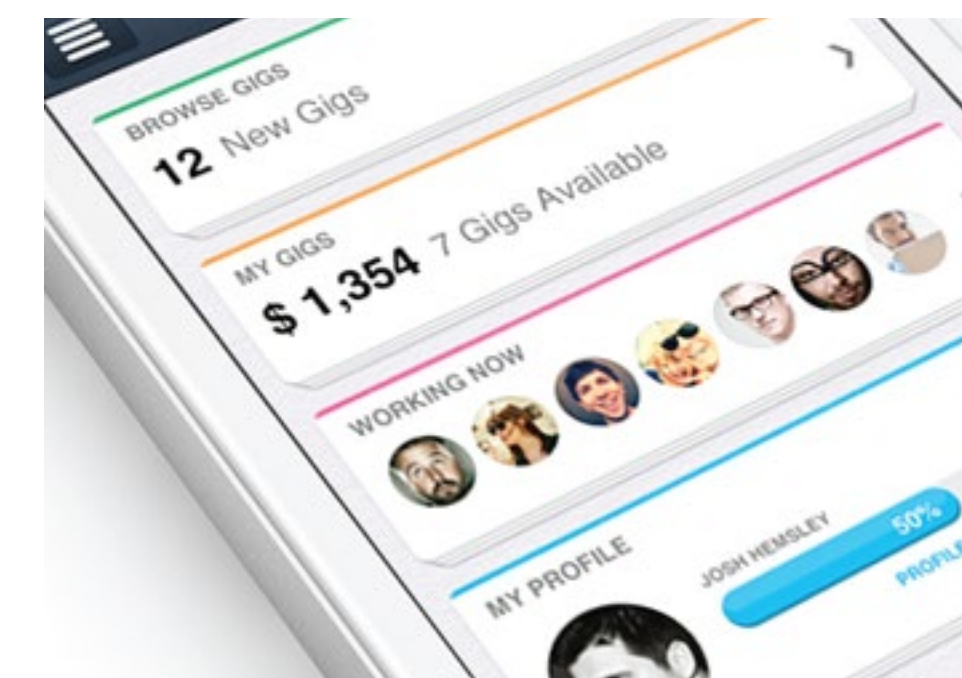
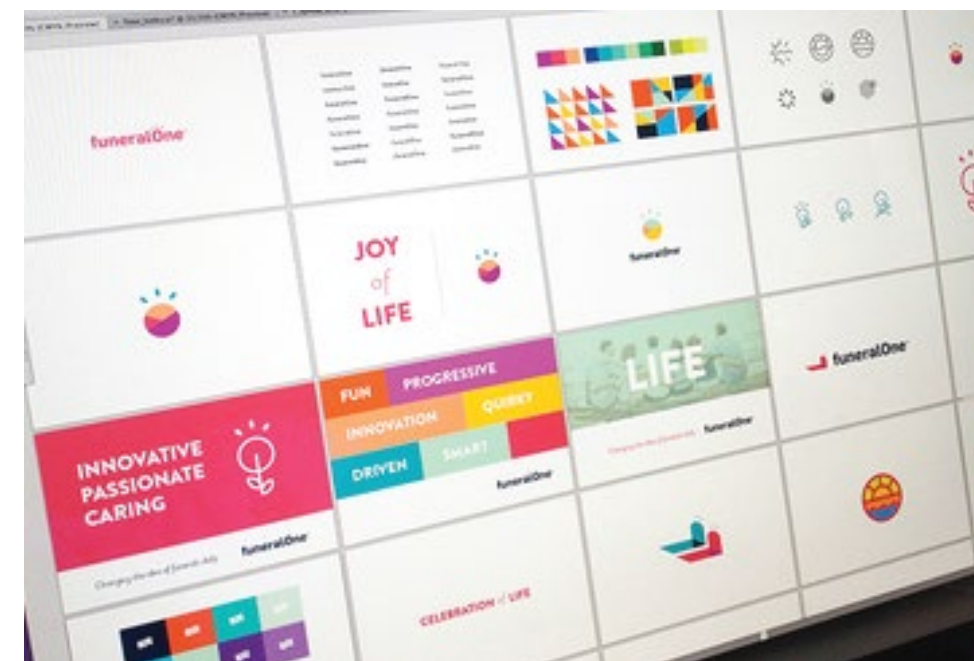
Keywords

Playful

Colorful

Saturated

Fun



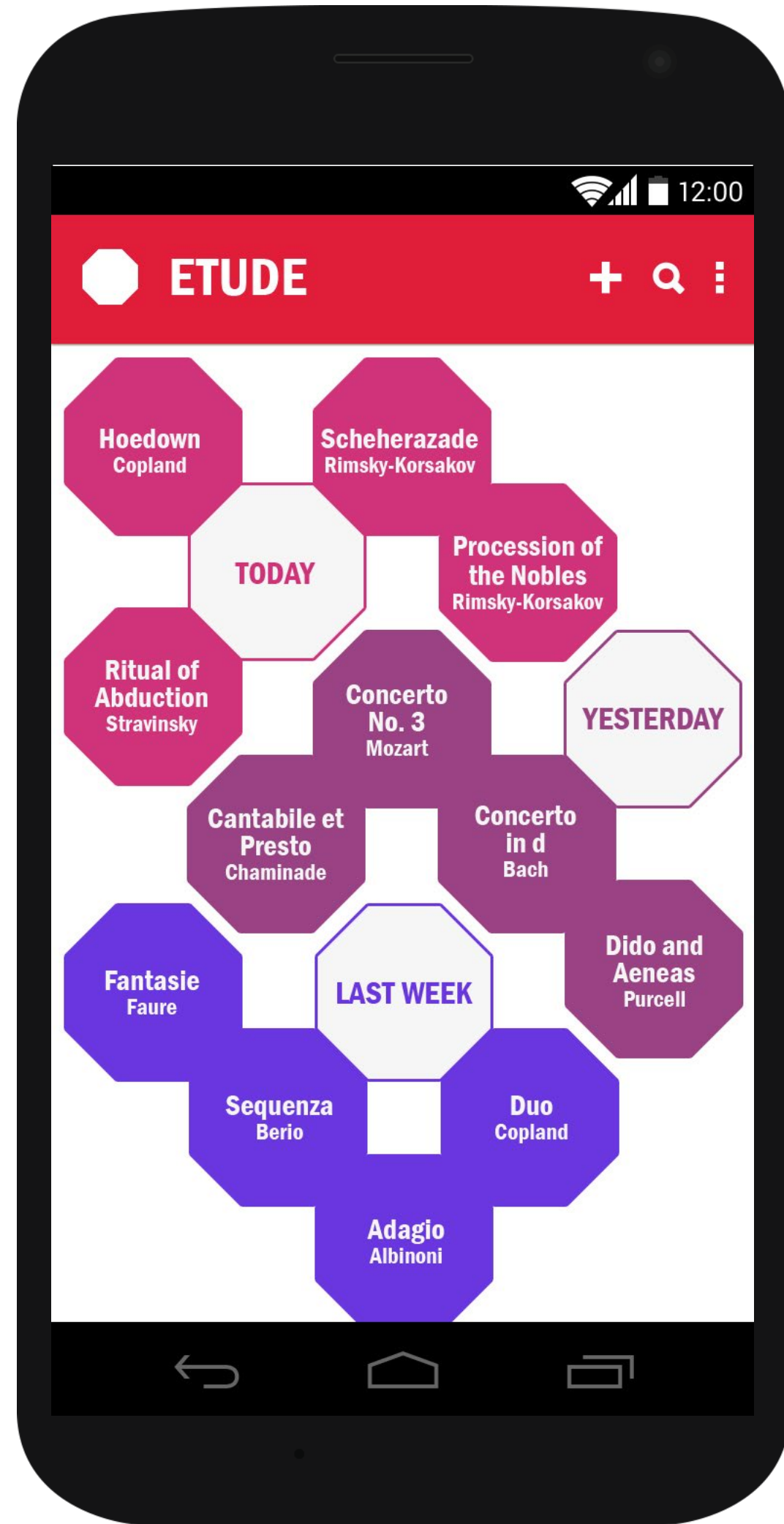
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Keywords

- Playful
- Colorful
- Saturated
- Fun

Music Log



Piece: Intonation



Direction 3 Modern & Minimalist

This direction gives an orderly and precise mood. Graphic elements do not distract from the content, and color is used to define interactivity. The visual direction is bright, precise, and open.

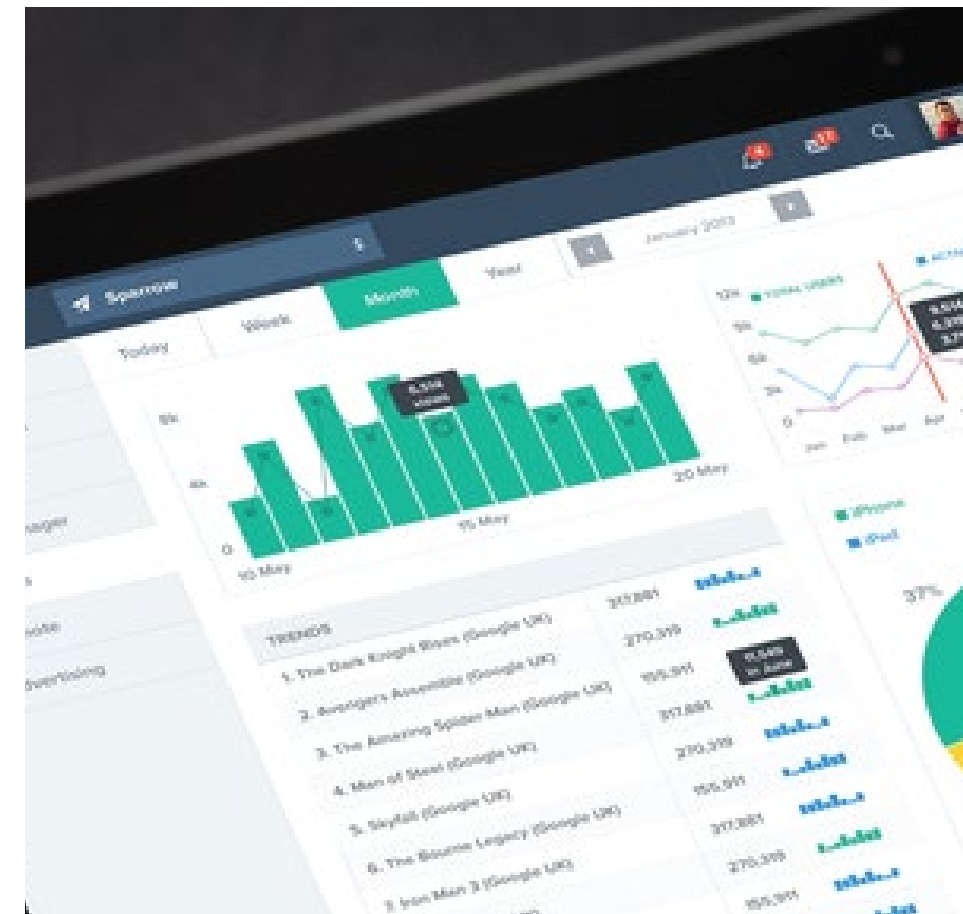
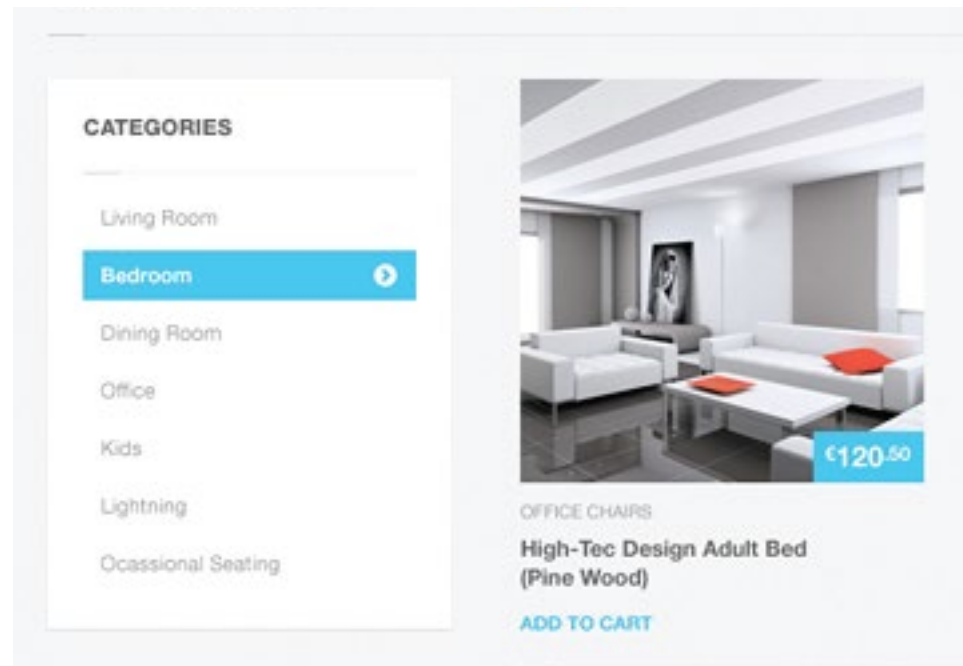
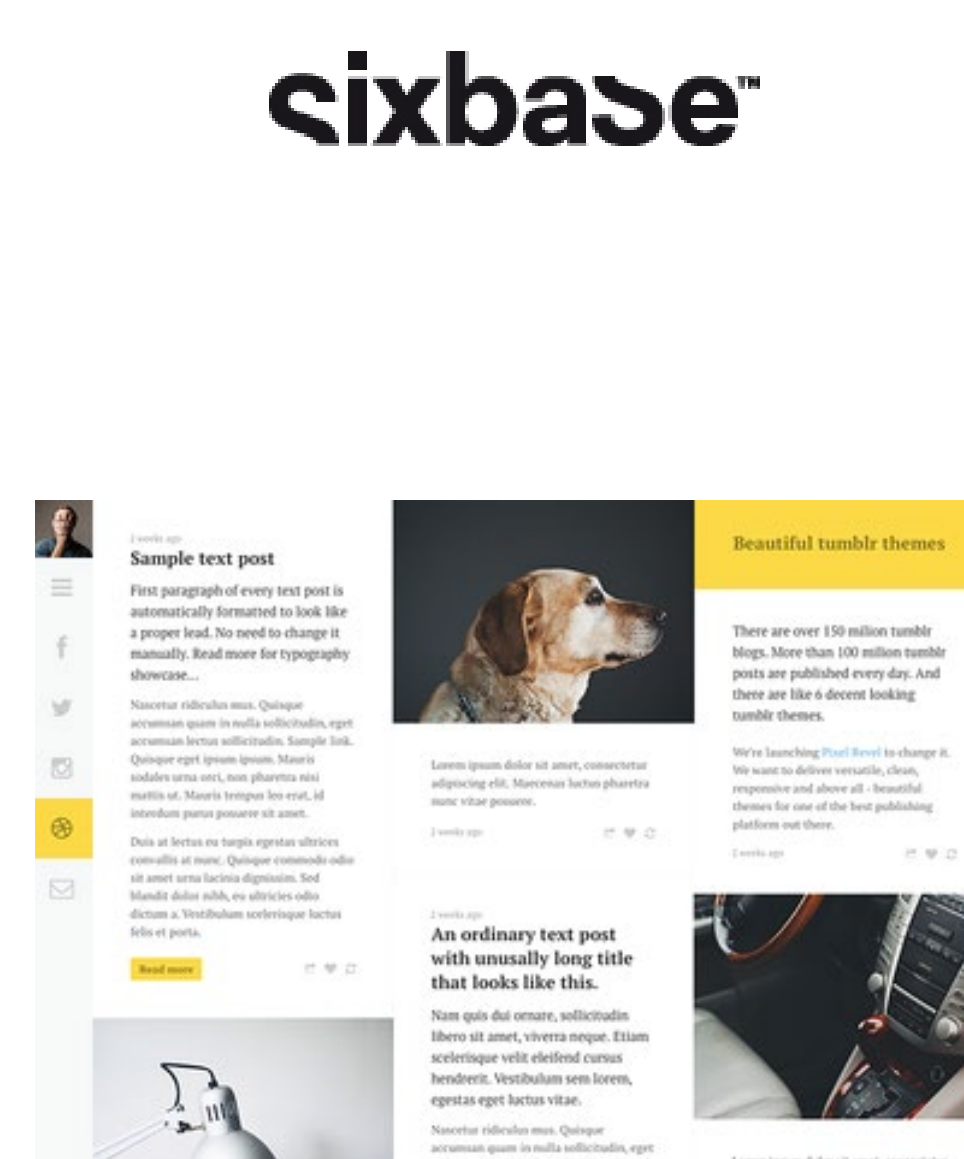
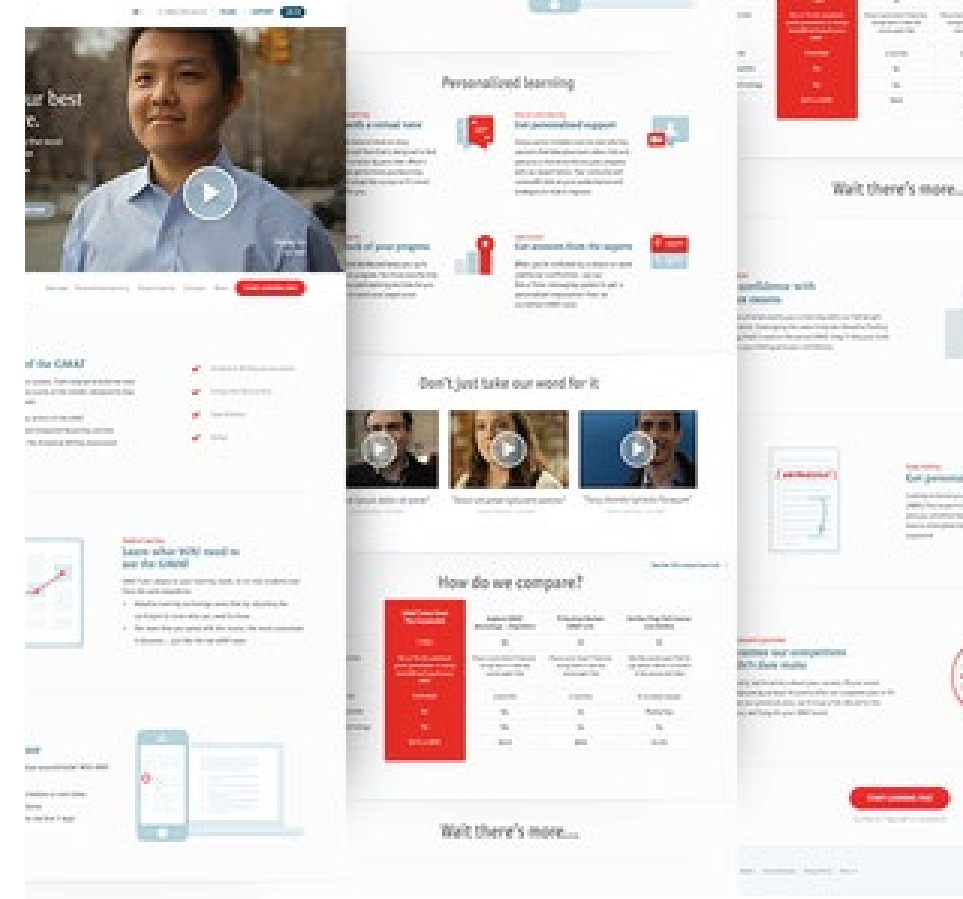
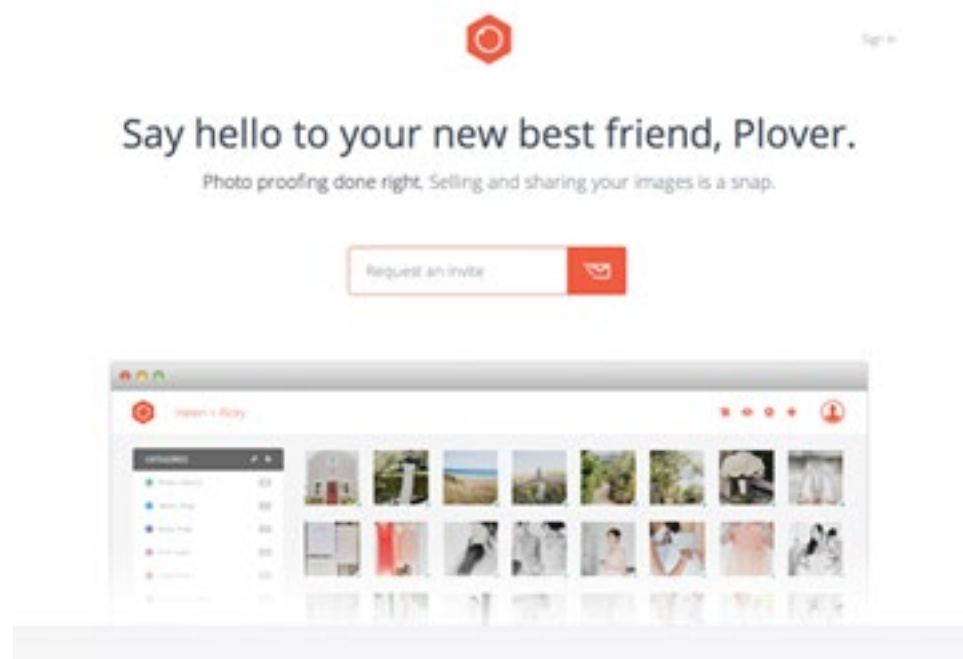
Keywords

Clinical

Open

Bright

Free



Direction 3 Modern & Minimalist

This direction gives an orderly and precise mood. Graphic elements do not distract from the content, and color is used to define interactivity. The visual direction is bright, precise, and open.

Keywords

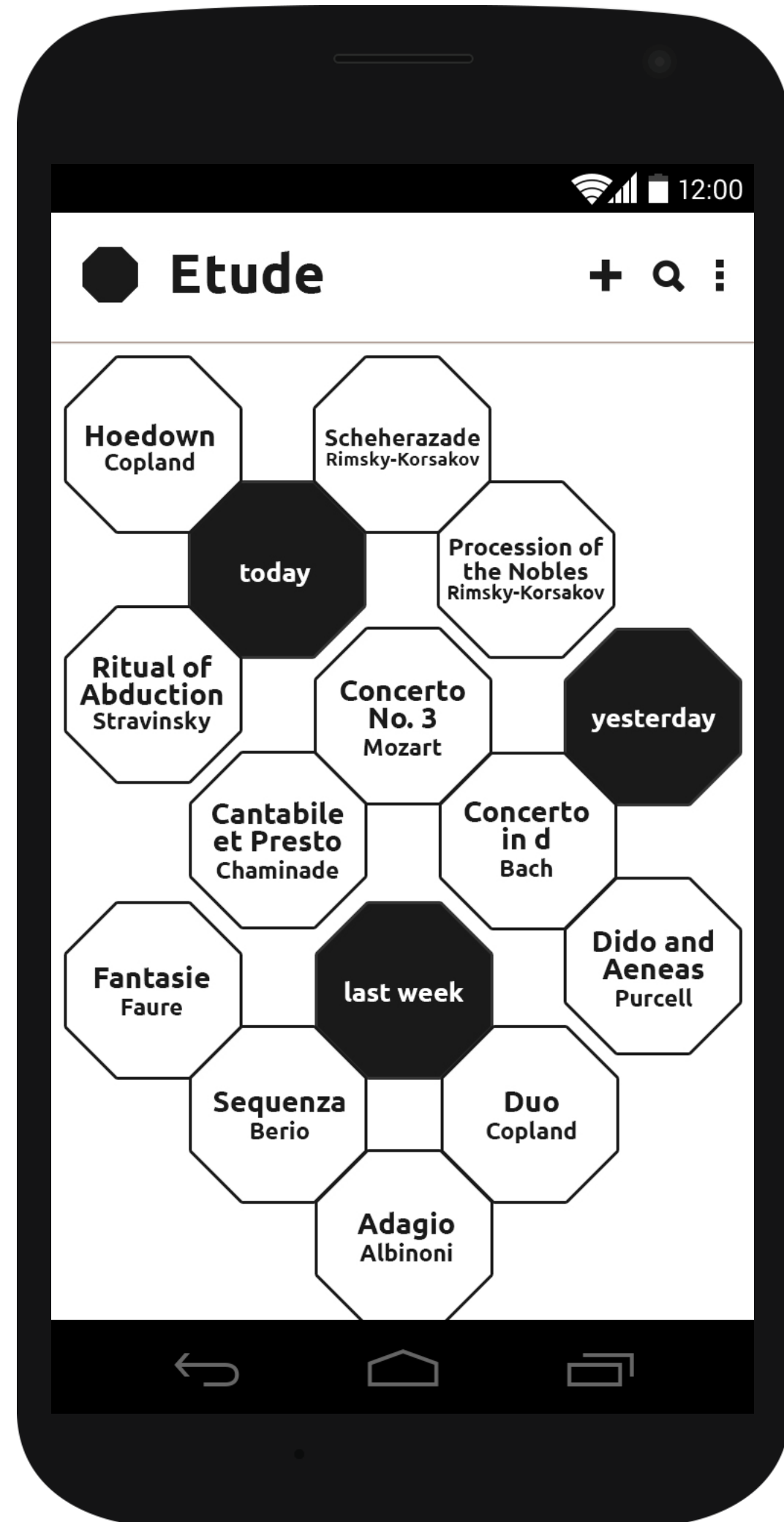
Clinical

Open

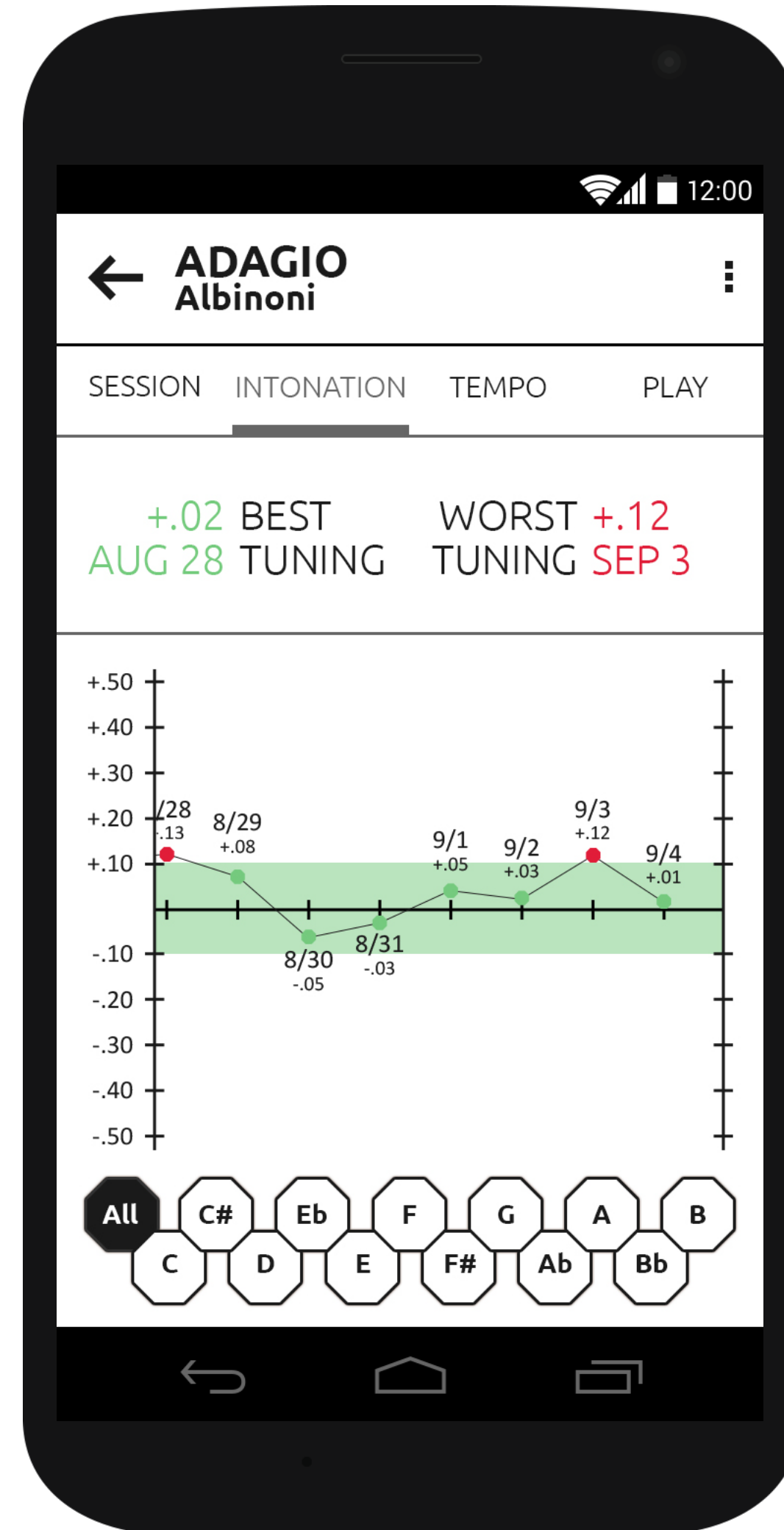
Bright

Free

Music Log



Piece: Intonation



Final Design Direction

Design Process

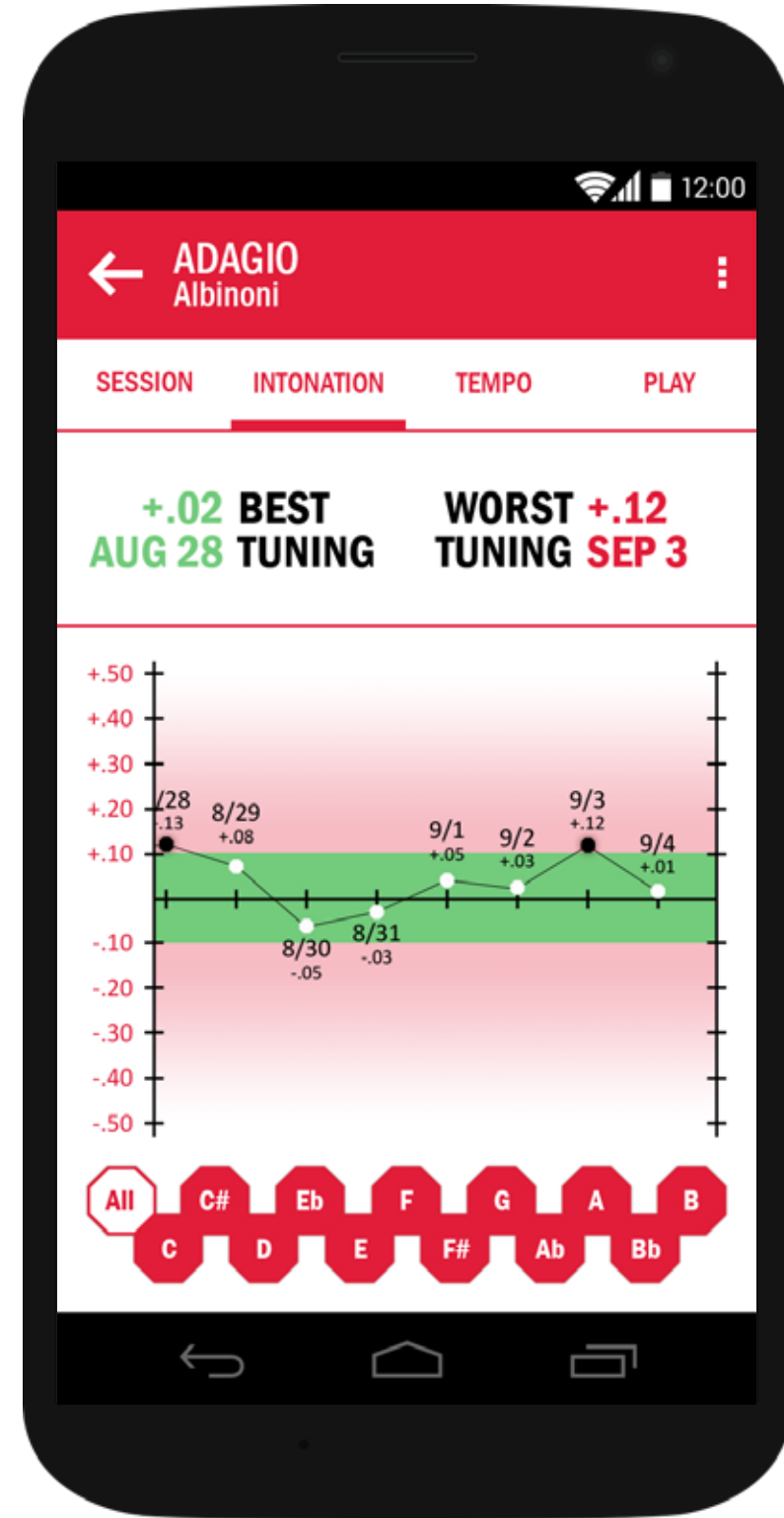
Design Notes

Designs

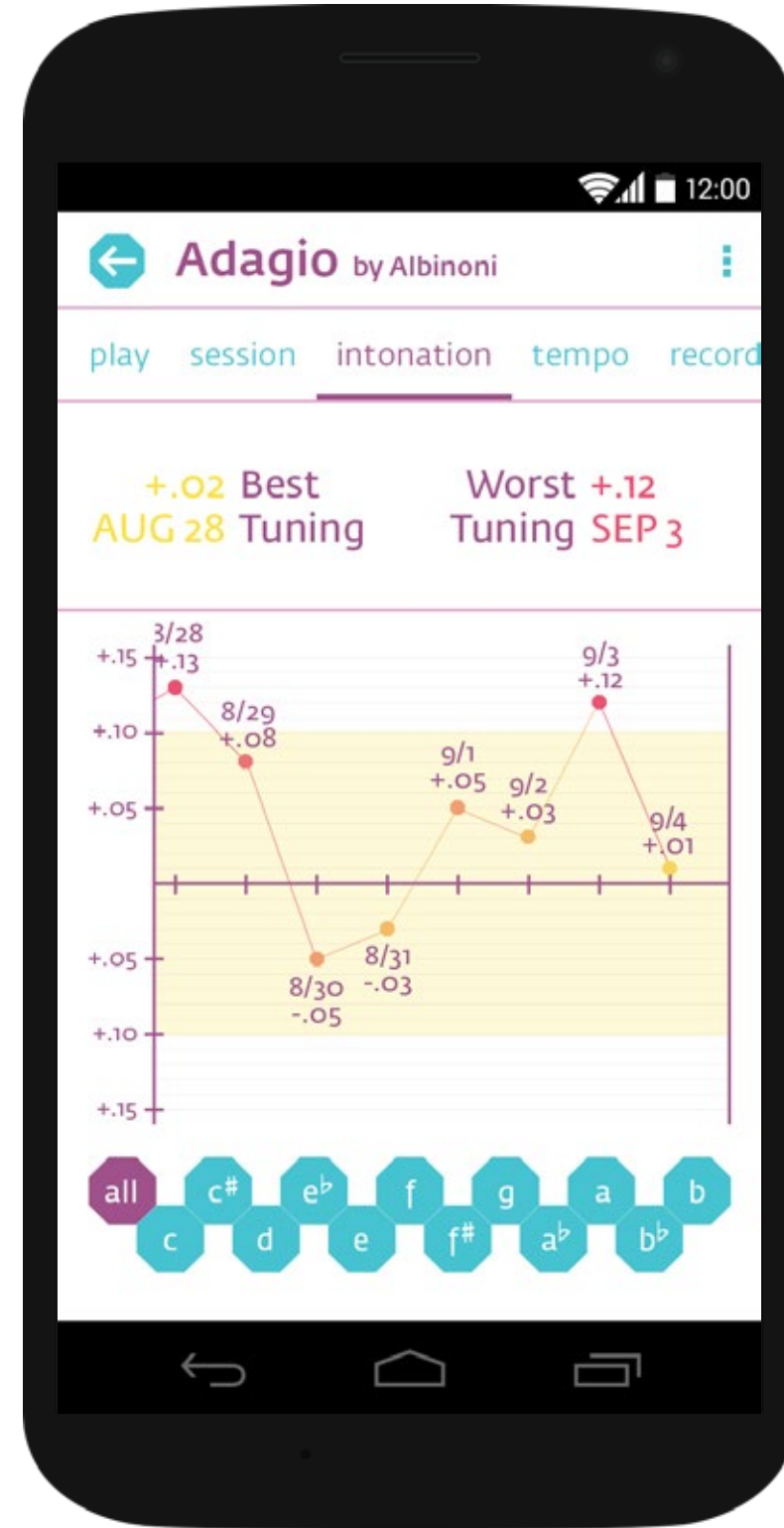
Design Process

With each round of revisions on the visual designs, the heirarchy improved and the use of color simplified.

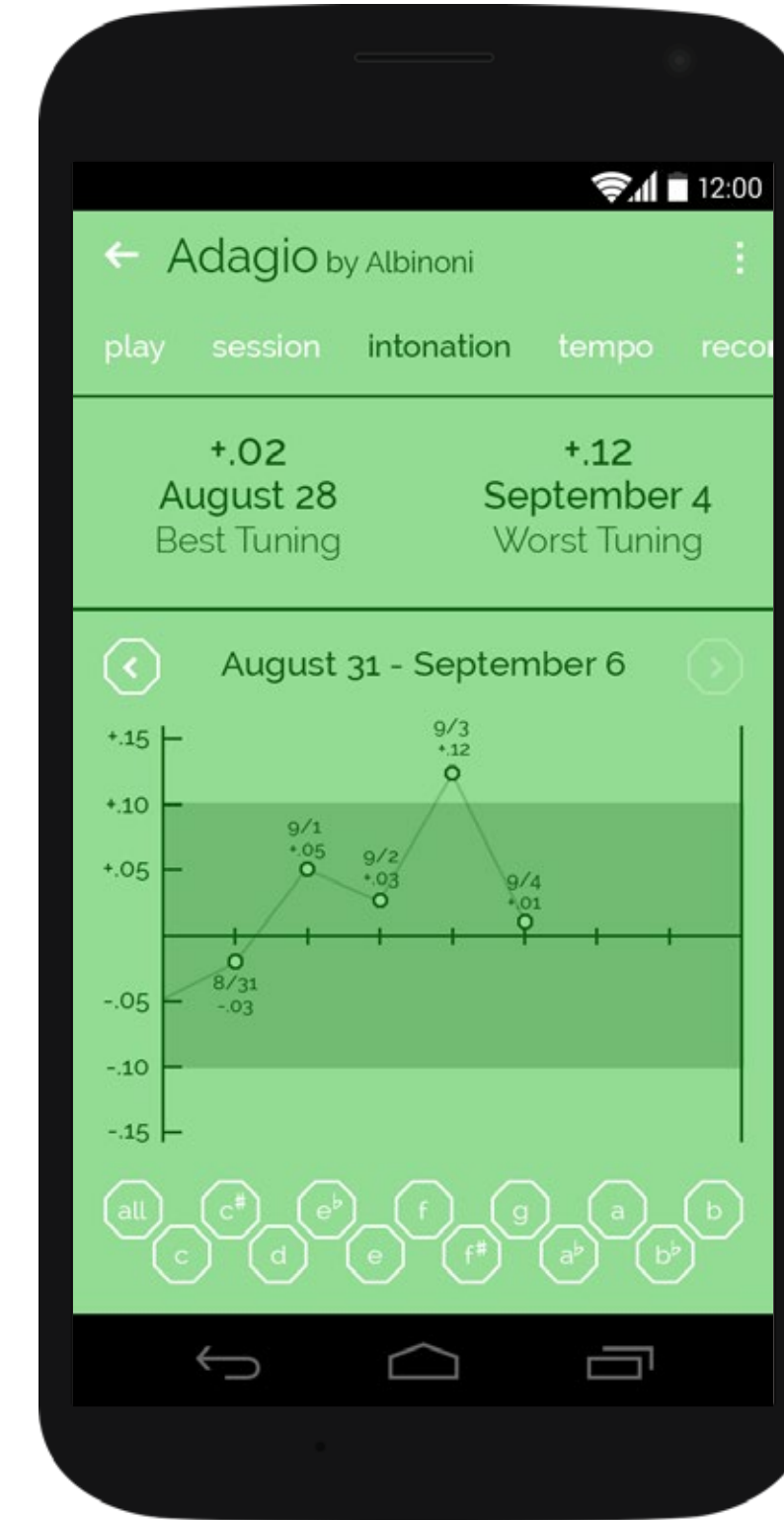
Preliminary Comp: Intonation



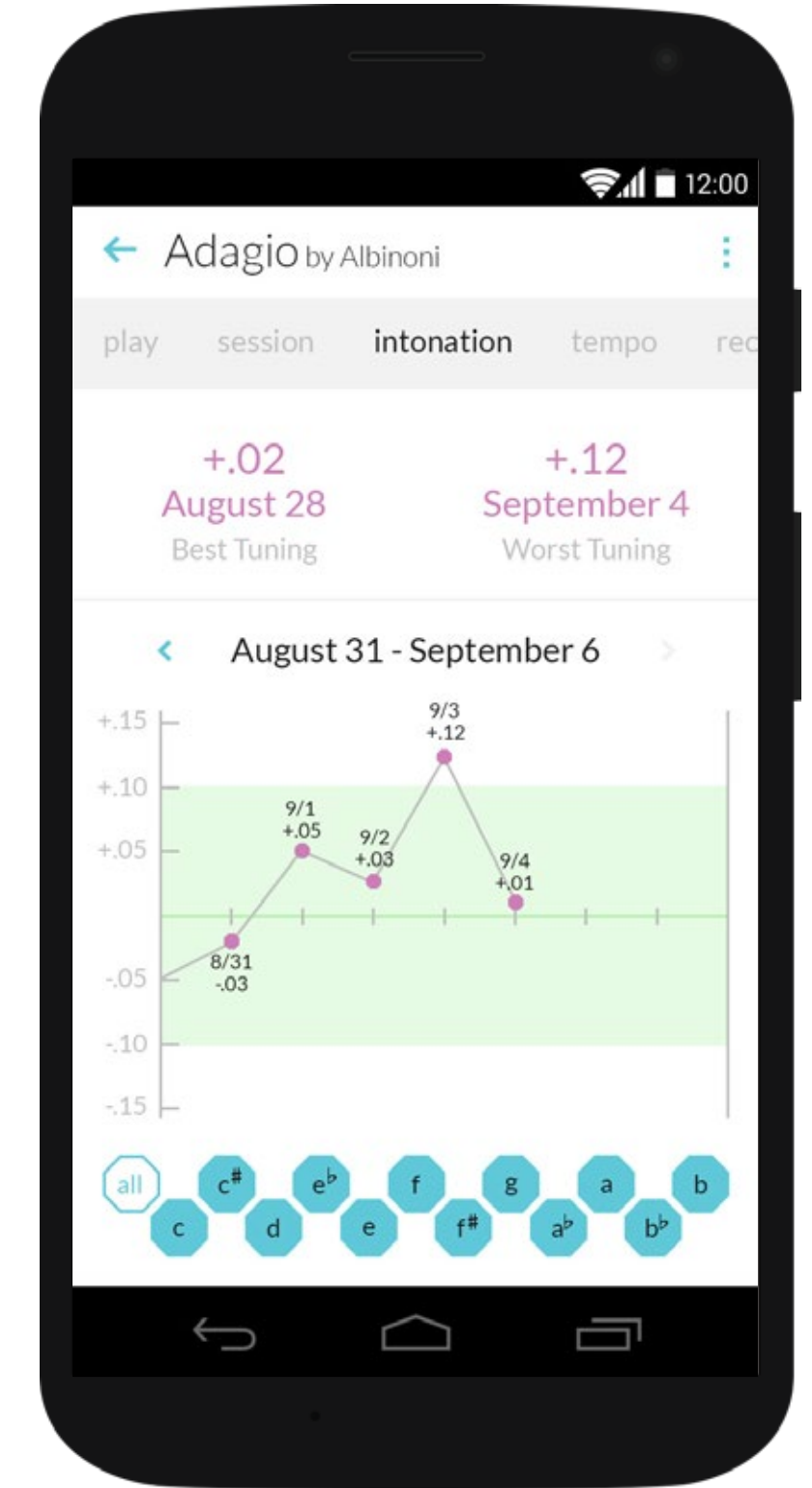
Round 2: Intonation



Round 3: Intonation

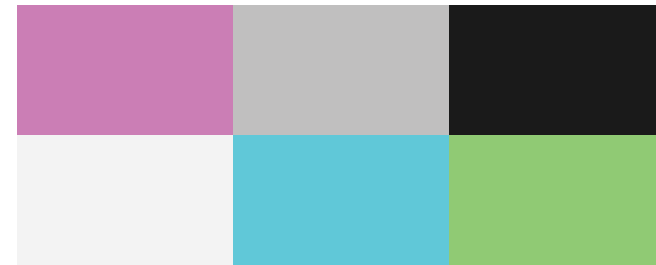


Final: Intonation



Design Notes

Color Palette



Typography - Lato

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

General Notes

Each screen of the app has a white background, with light gray denoting secondary navigation.

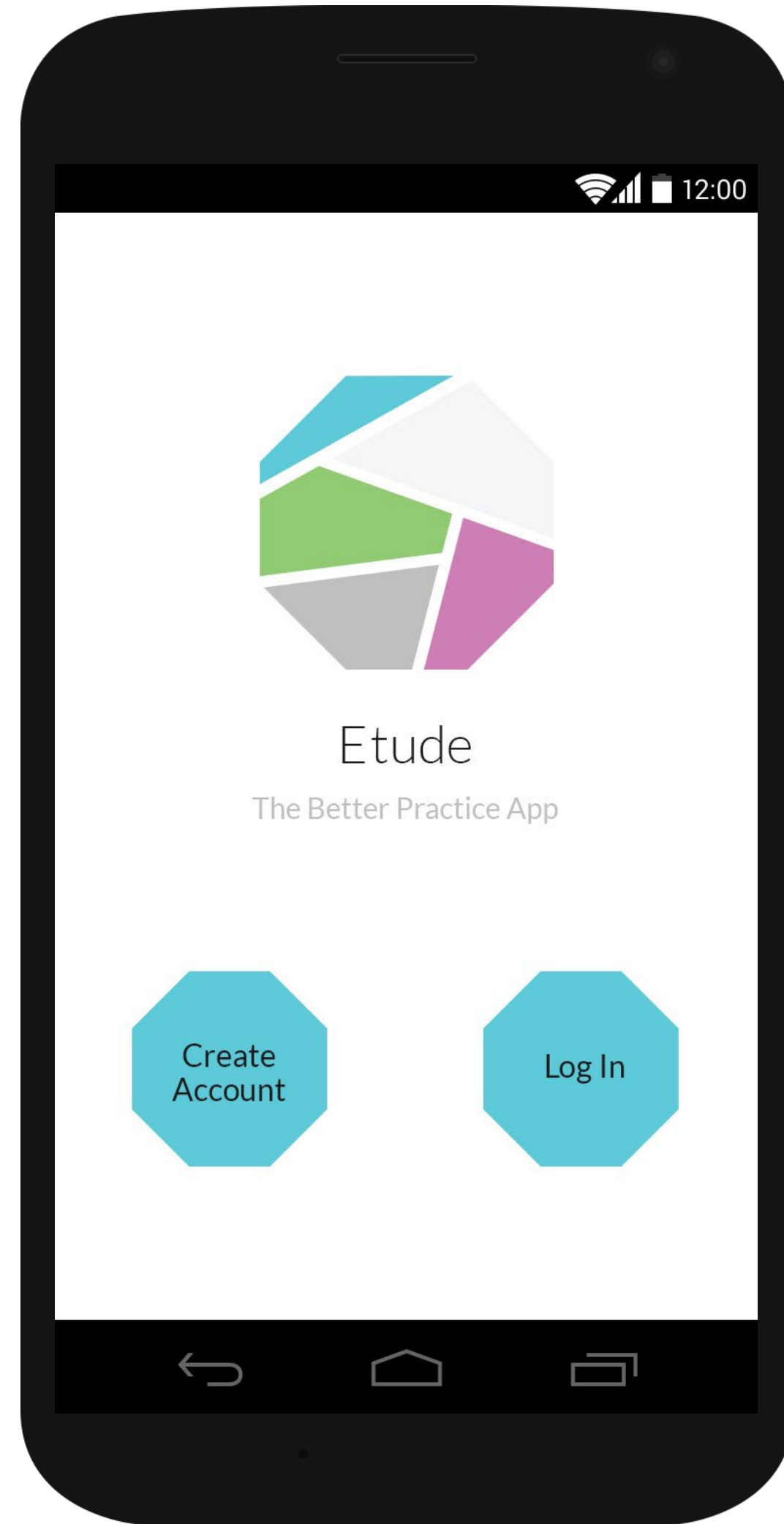
Static text is black or gray. It is lowercase, unless it's been entered by the user.

Interactive elements are blue with a solid black icon.

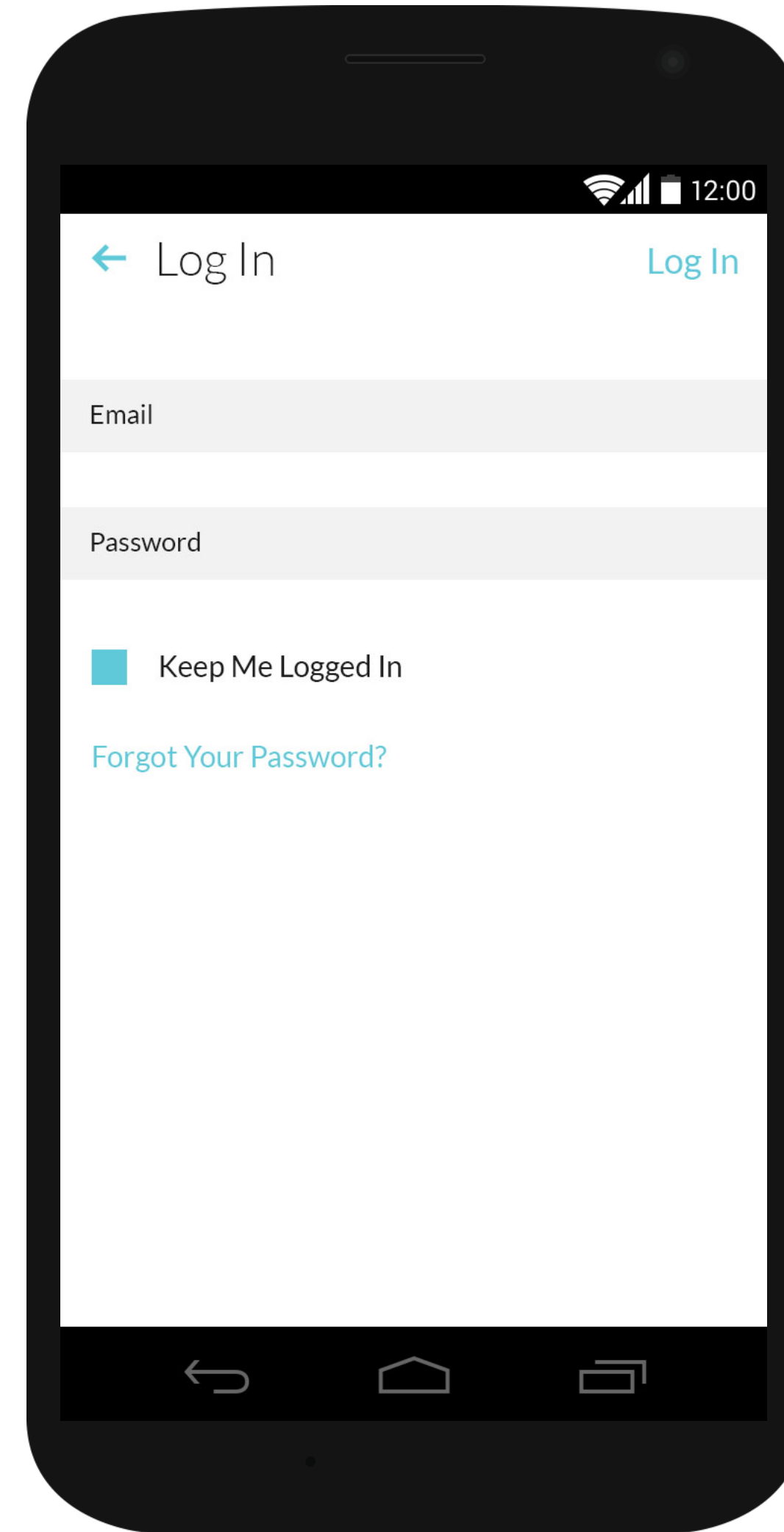
Purple serves as a secondary accent for pop ups and changing states.

Log In: Returning User

Opening Screen



Log In

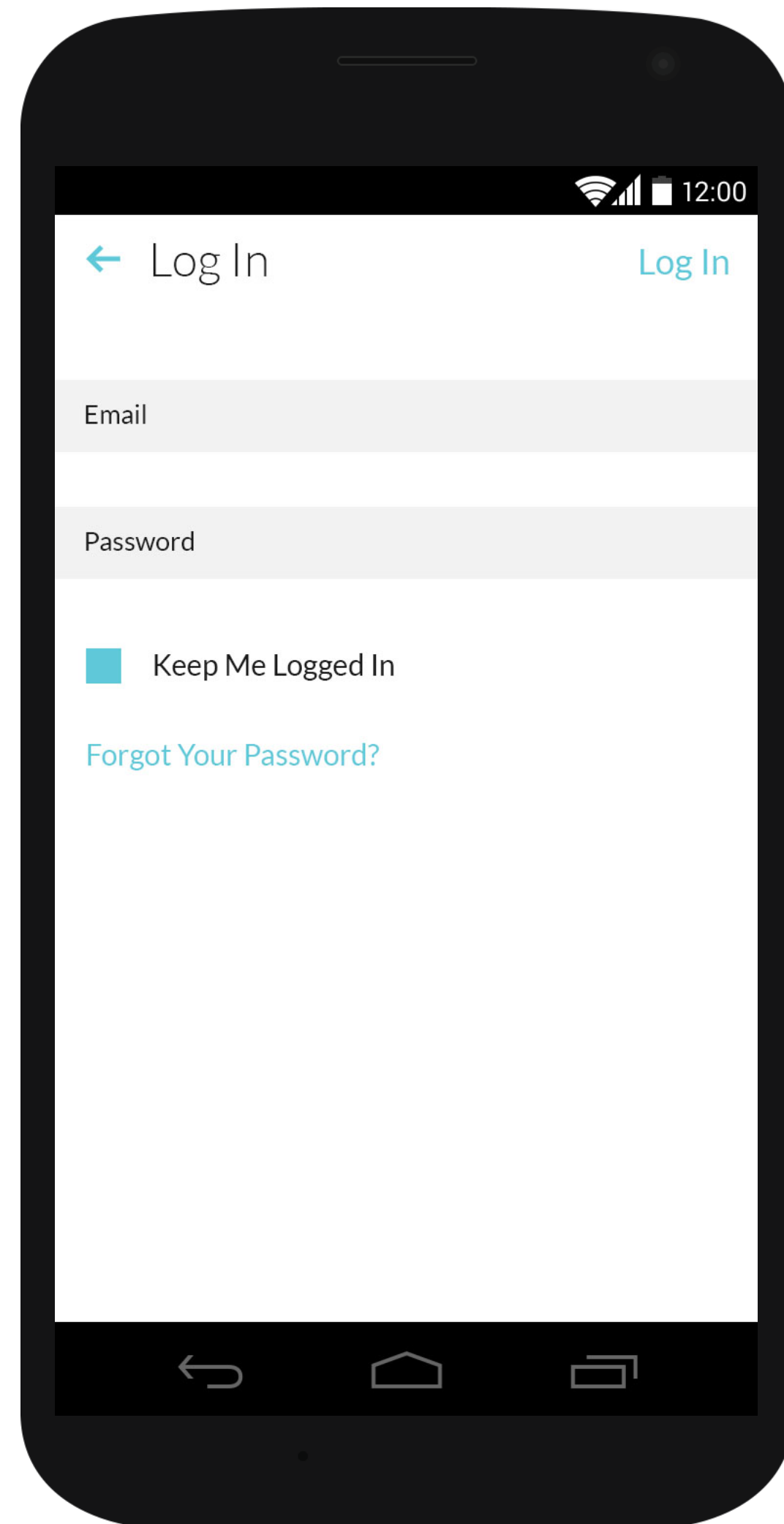


Music Log

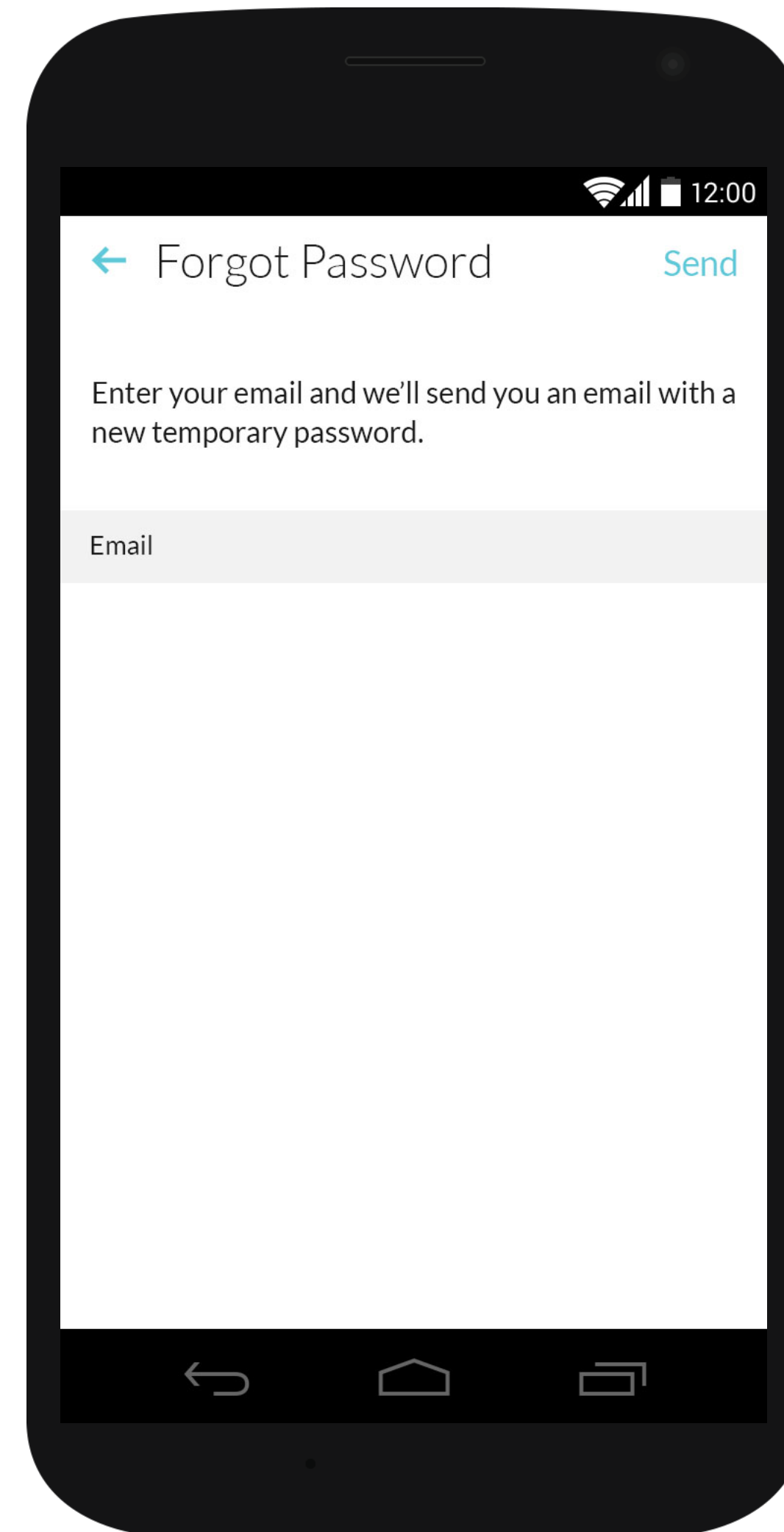


Log In: Forgotten Password

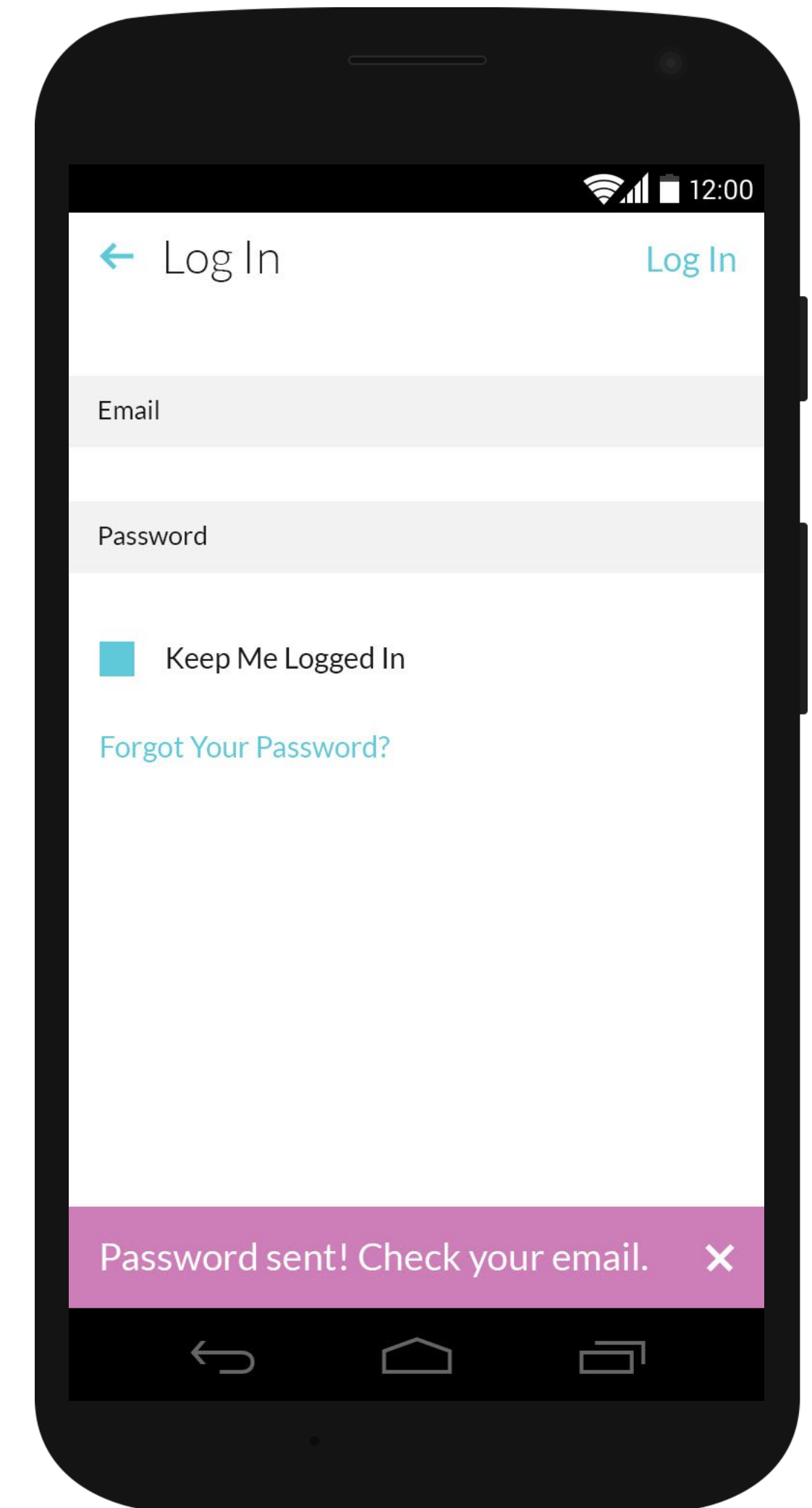
Log In



Forgot Password

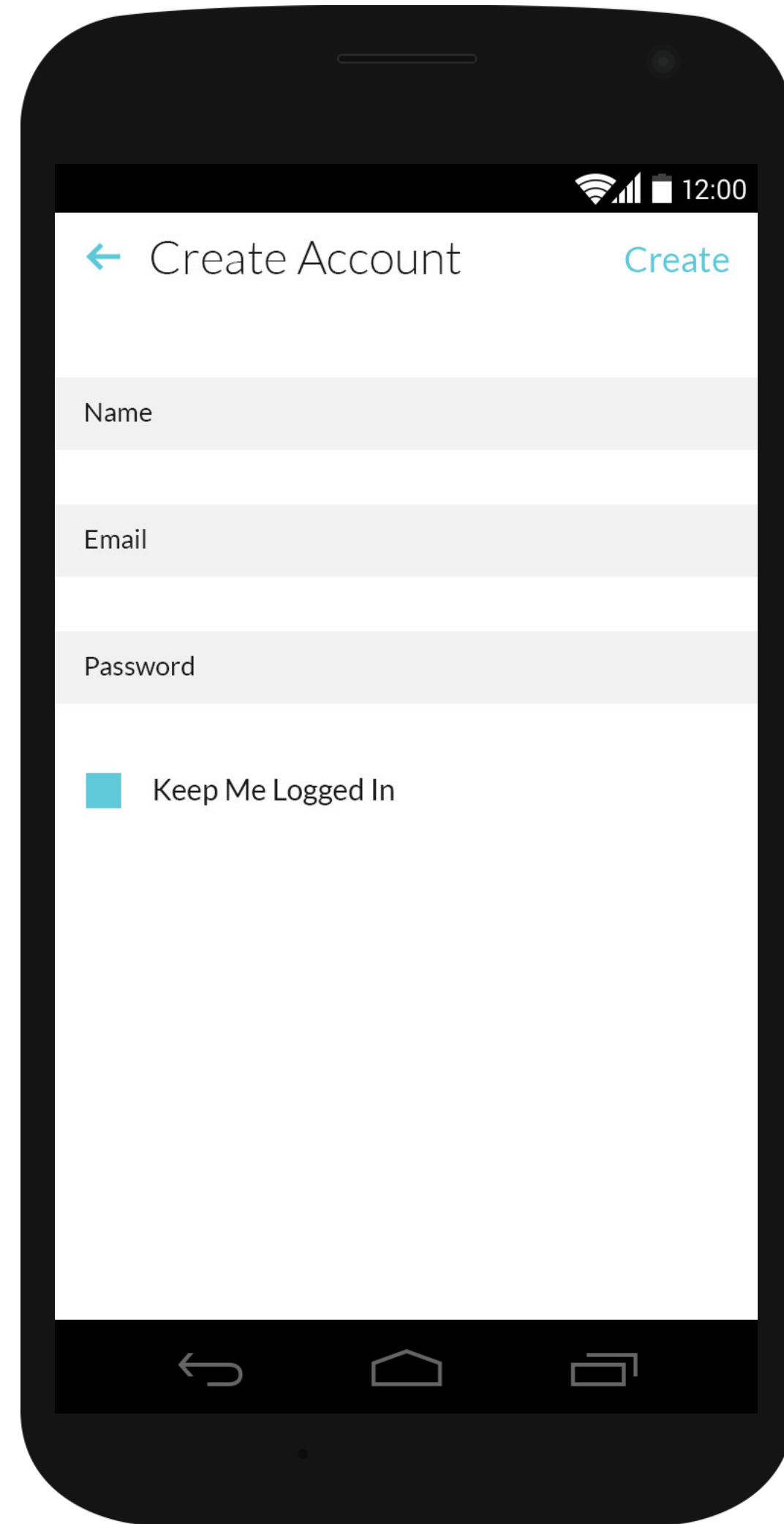


Log In - Sent Temporary password

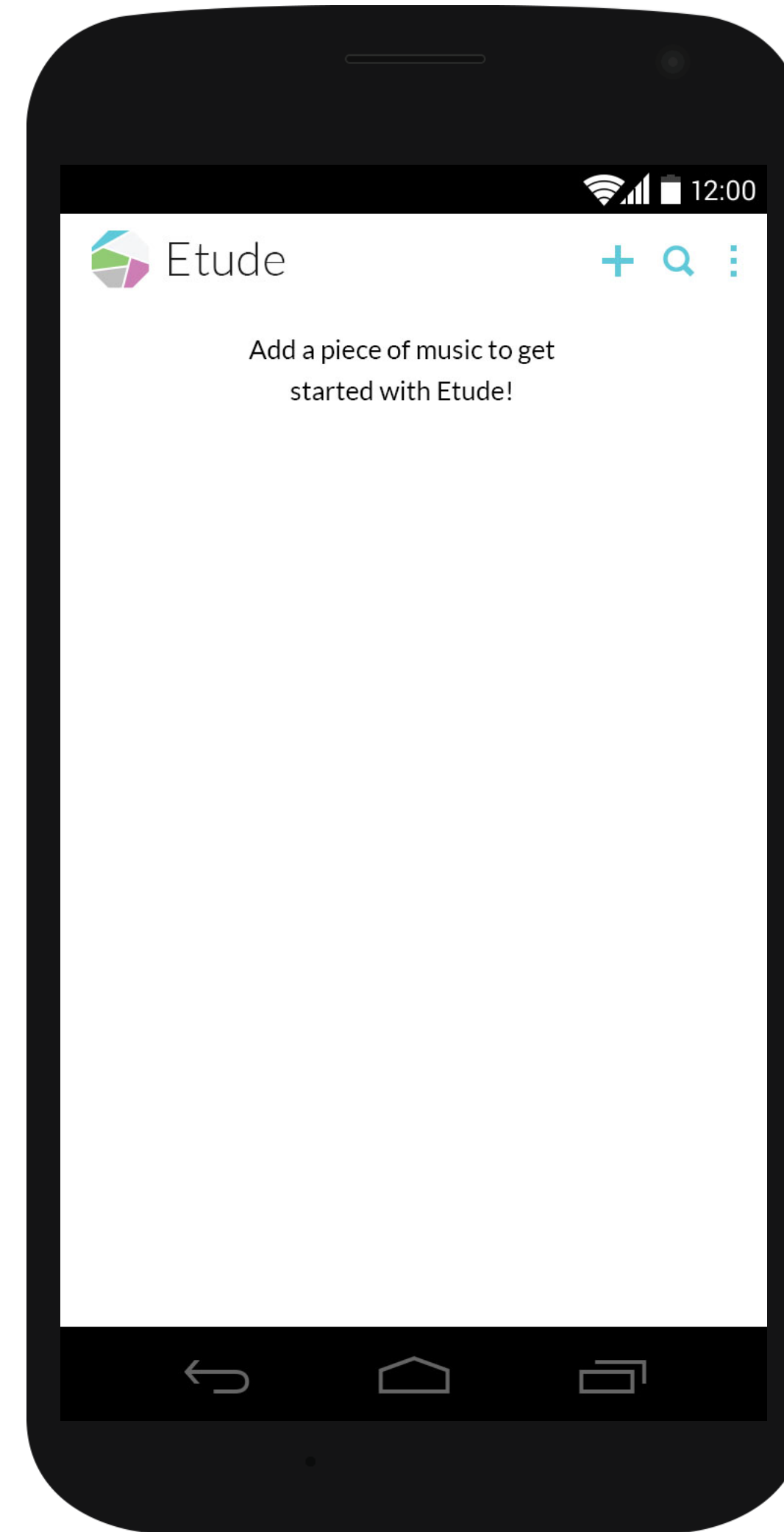


Create Account

Create Account



Music Log - First Time User

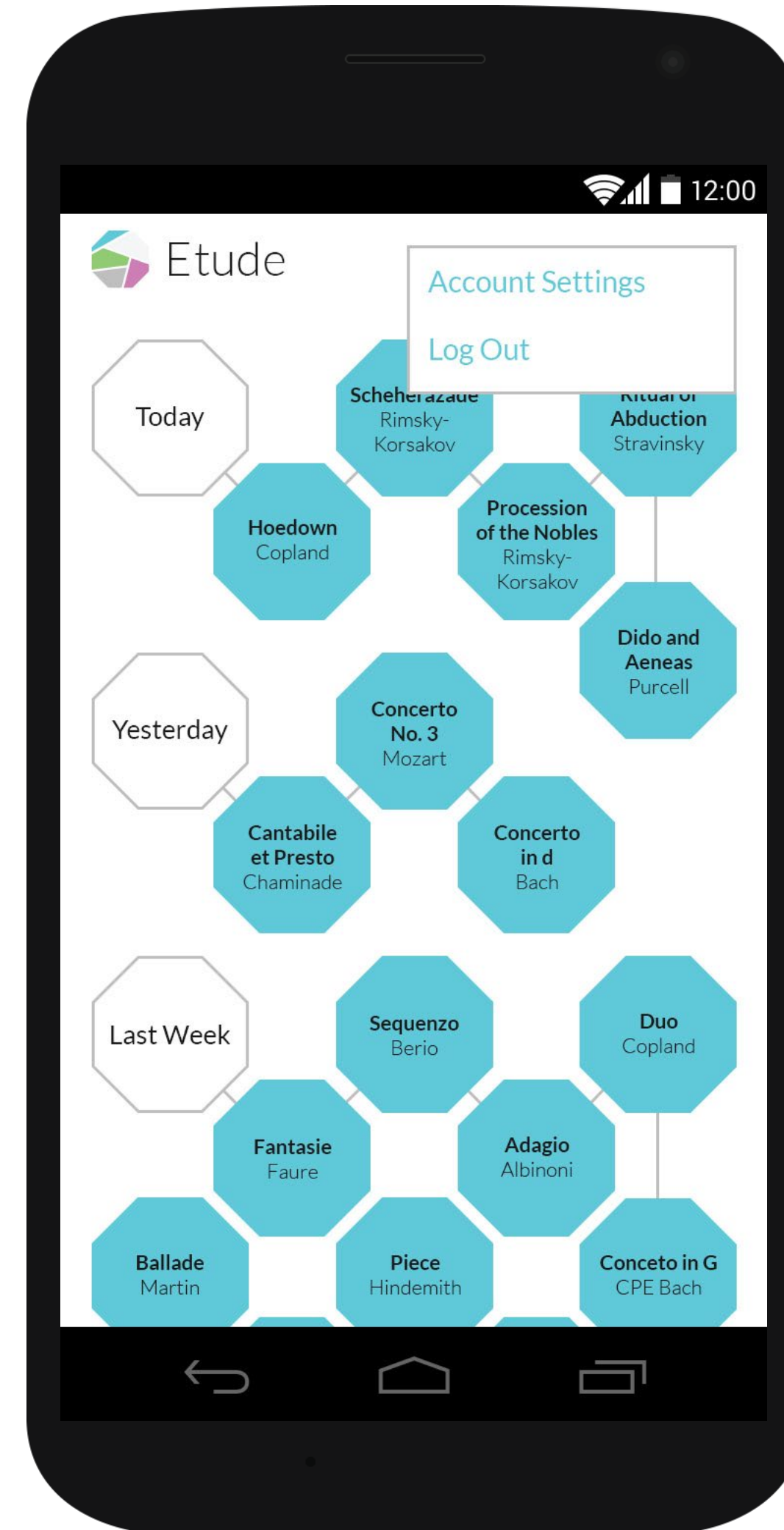


Music Log

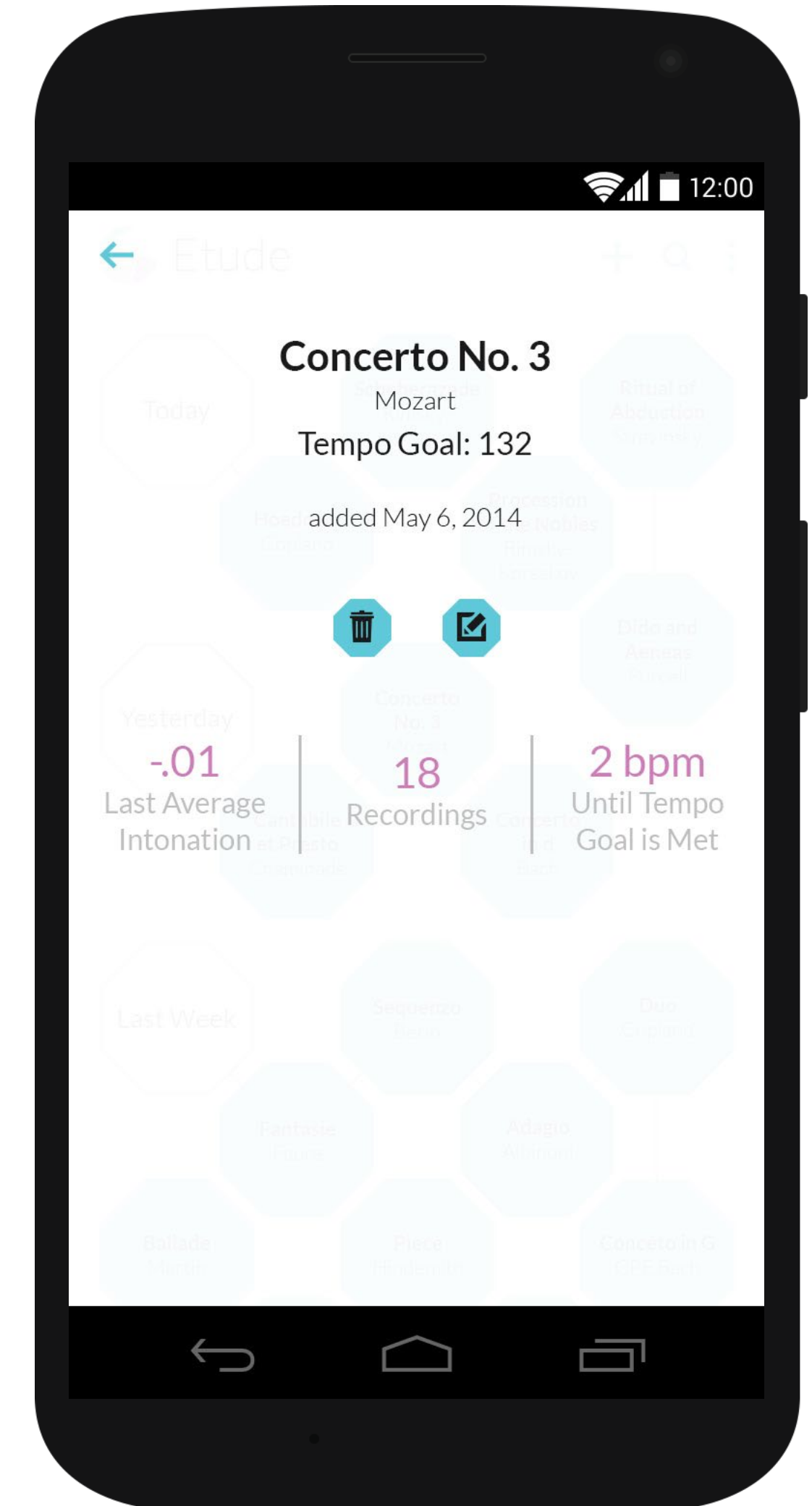
Music Log



Music Log - Menu



Piece Tile Press and Hold

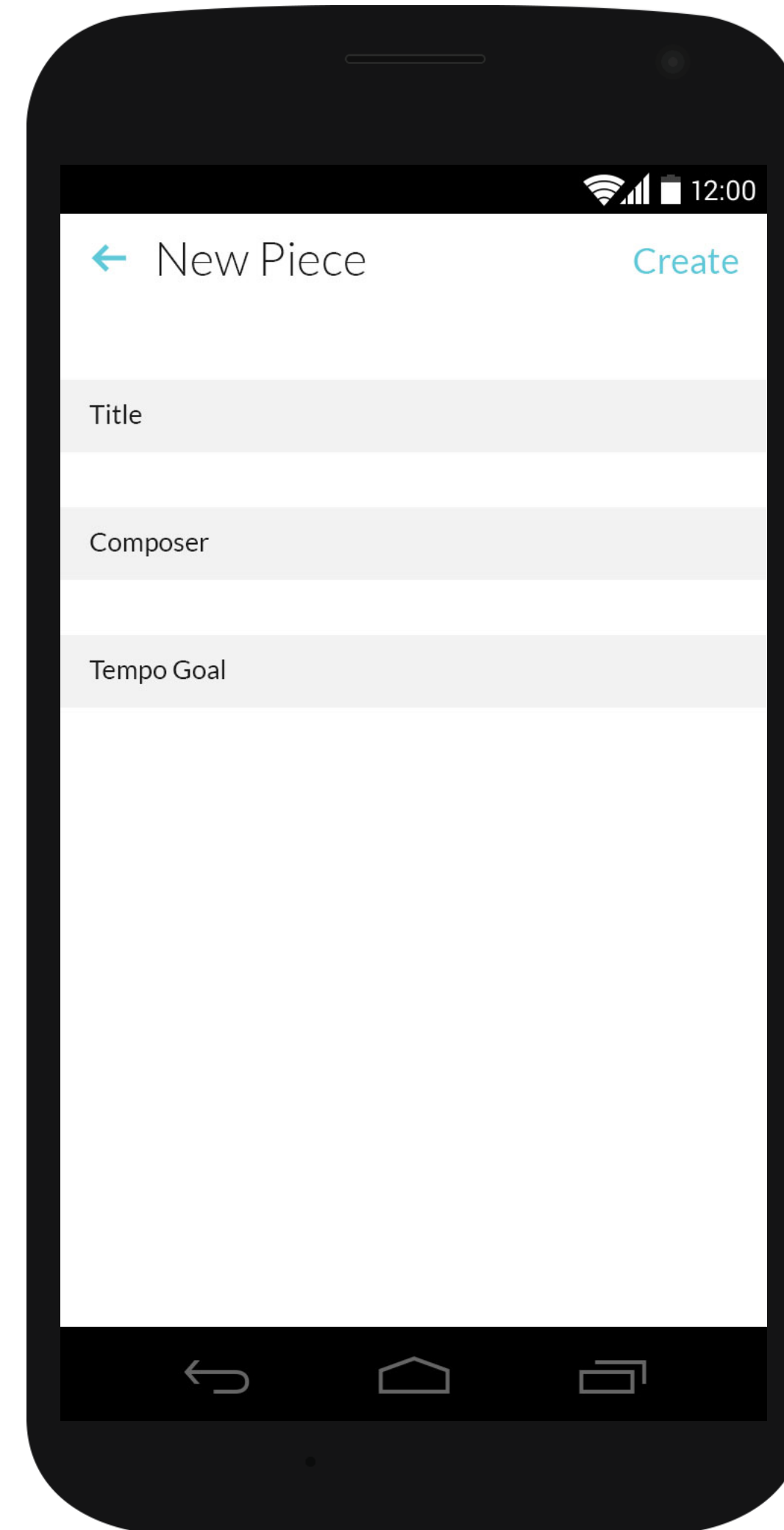


New Piece

Music Log



New Piece

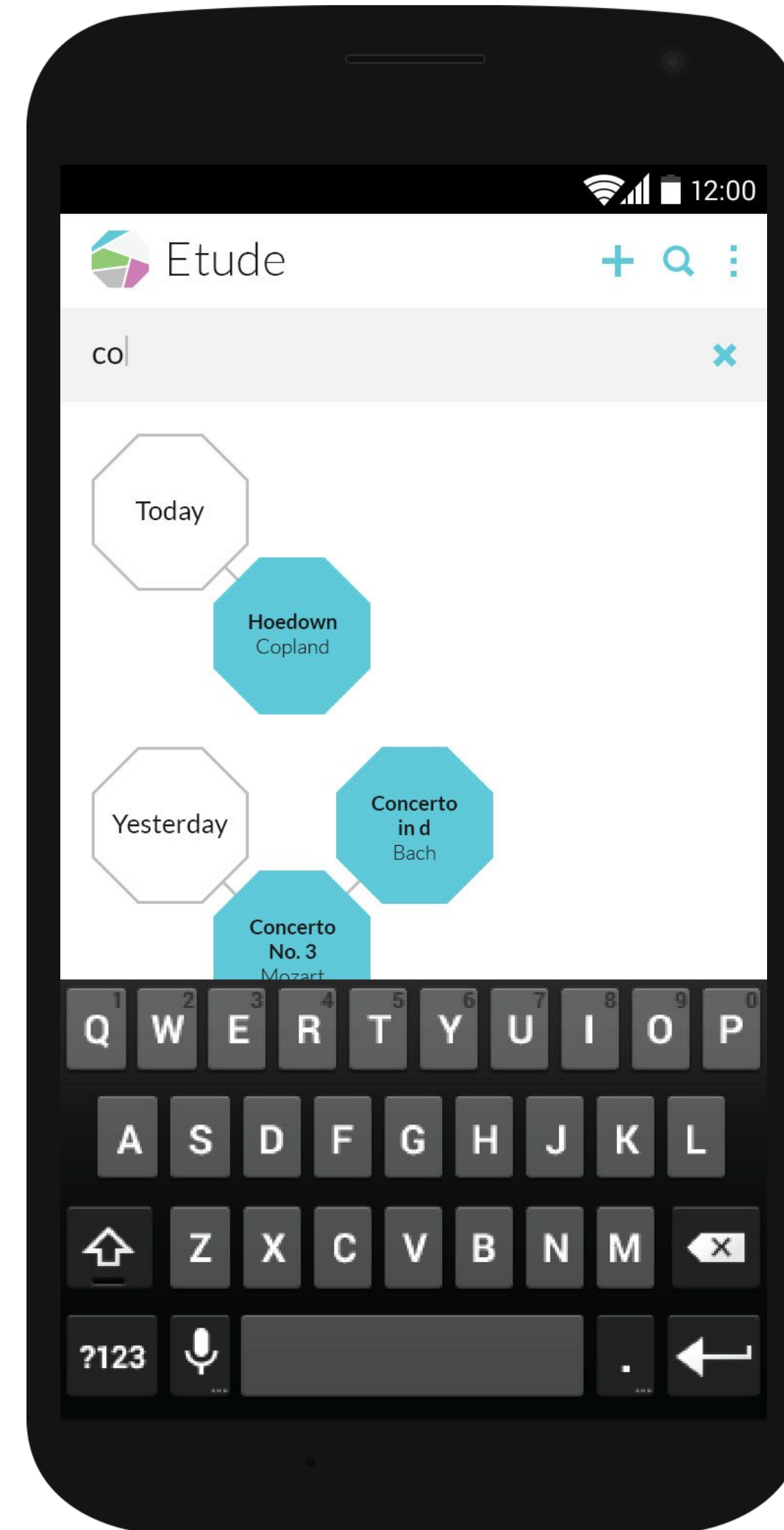


Search

Music Log



Search Results

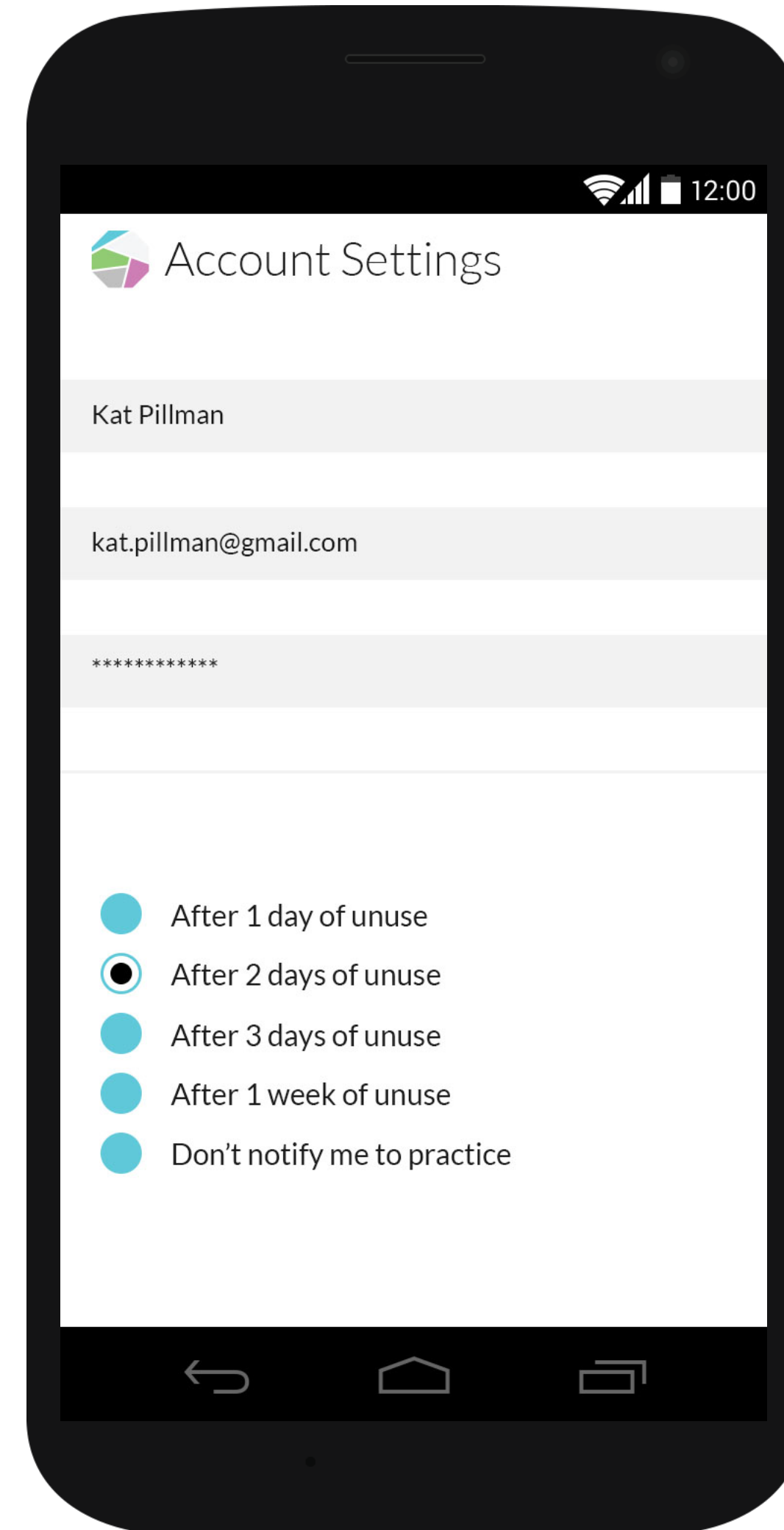


Account Settings

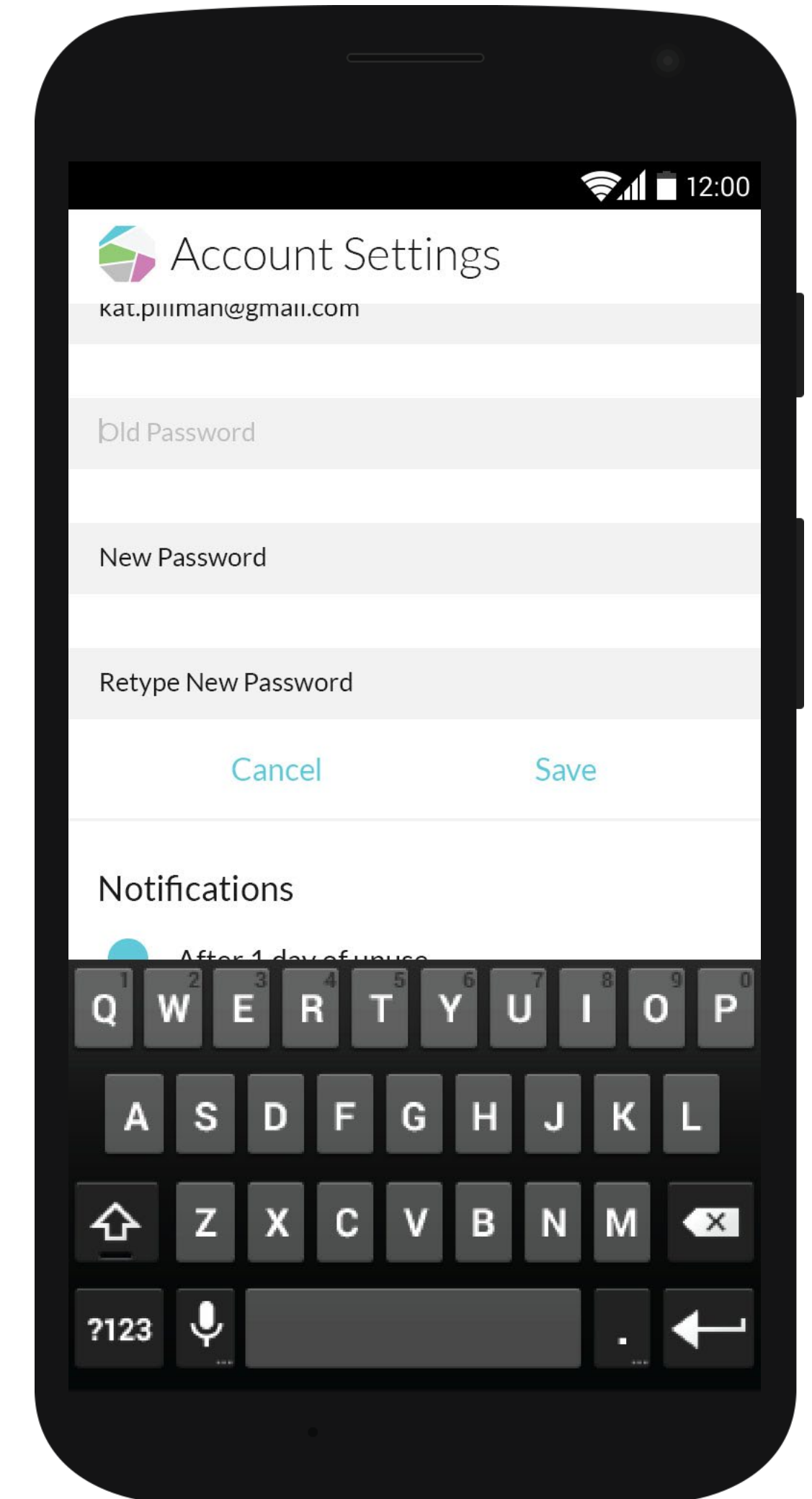
Music Log - Menu



Account Settings

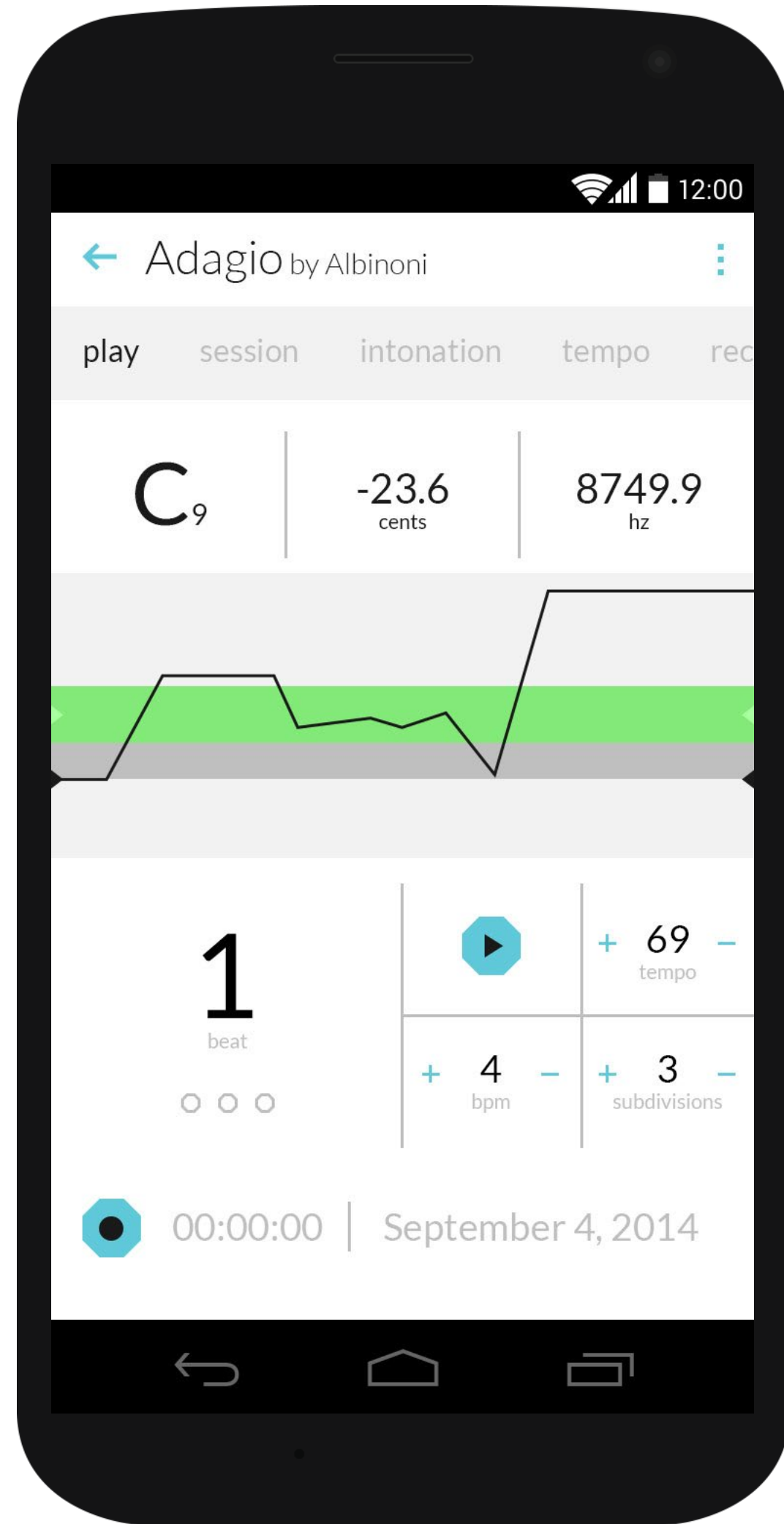


Account Settings - Edit

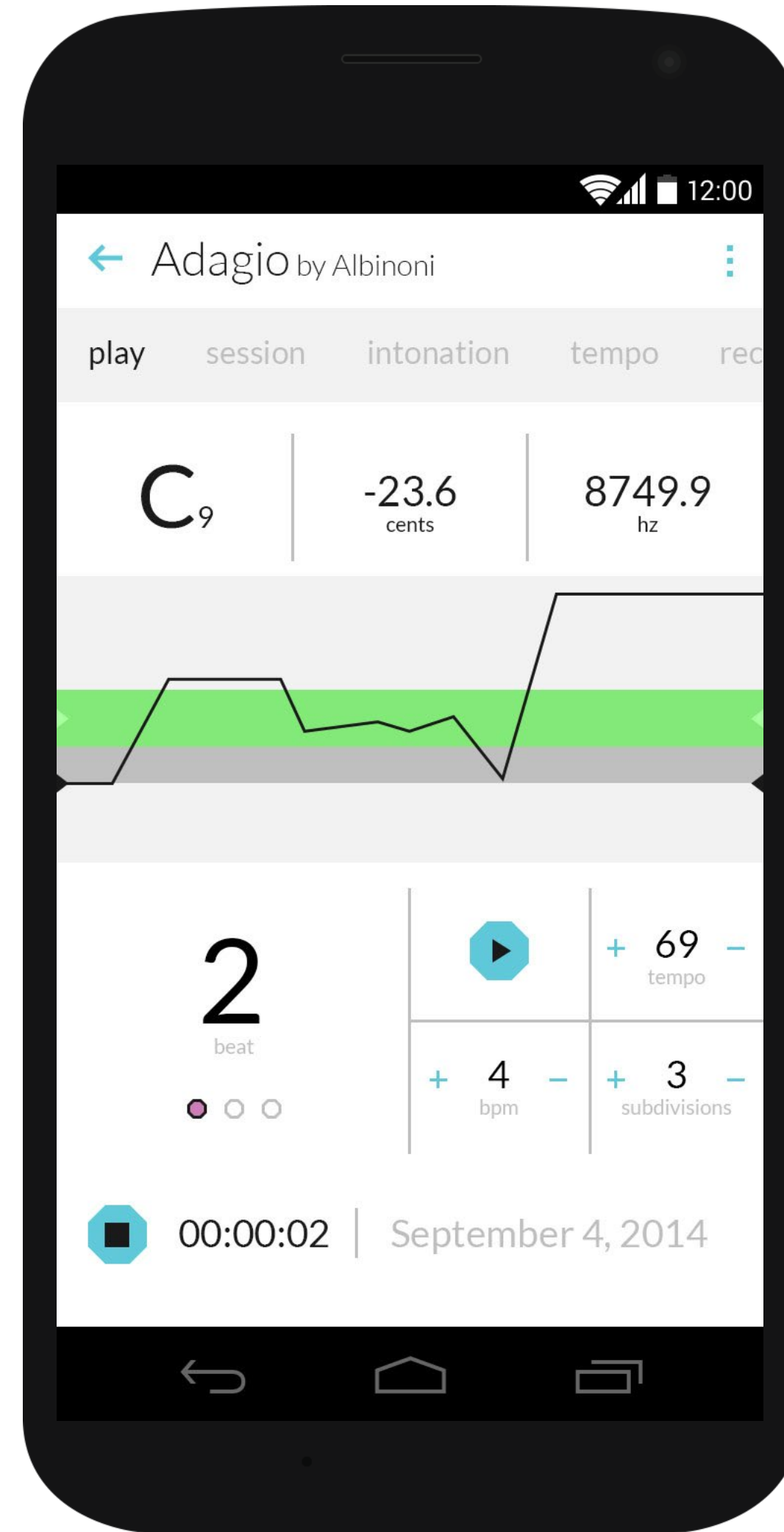


Piece: Play

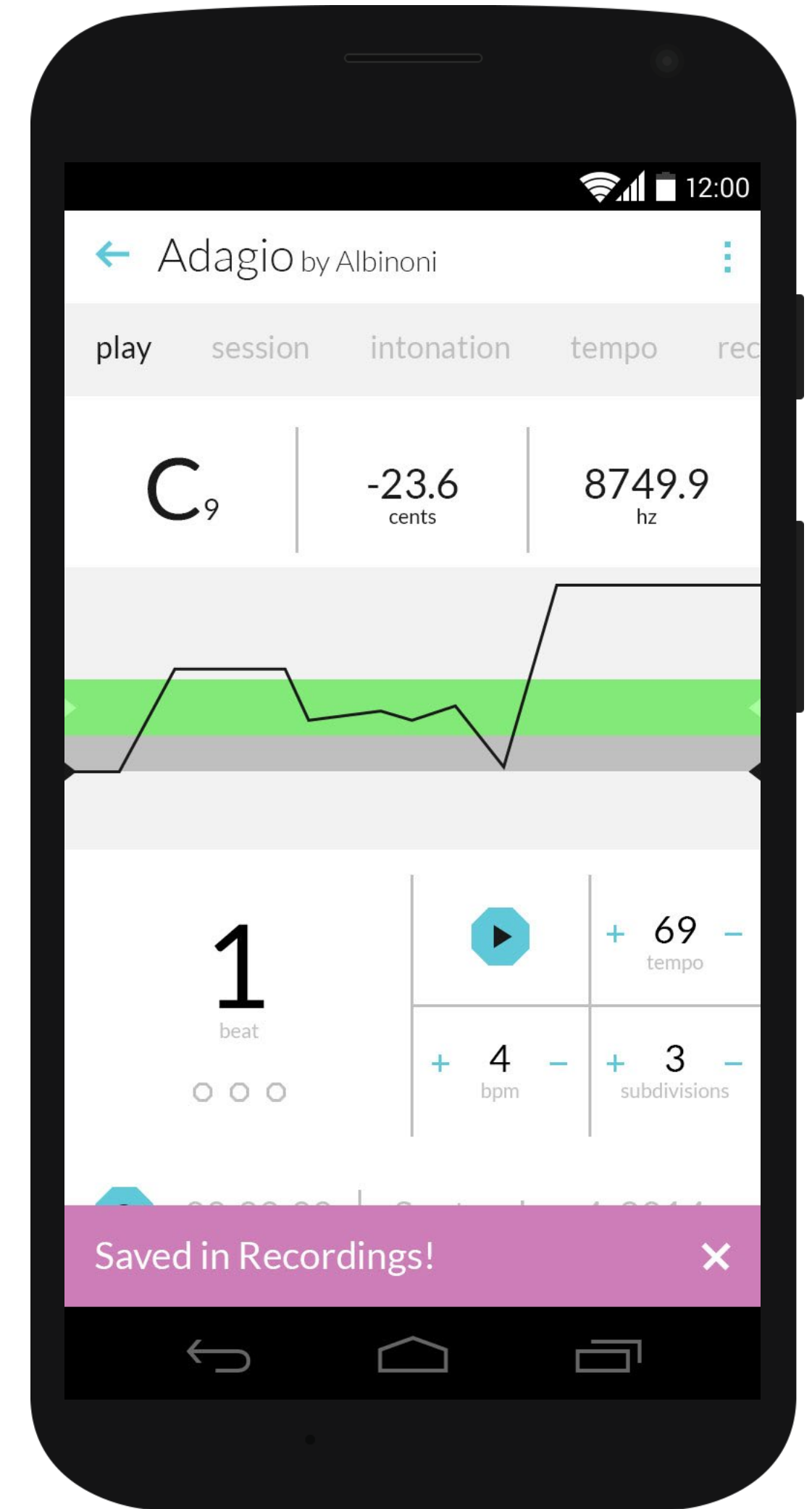
Piece: Play



Piece: Play - Recording

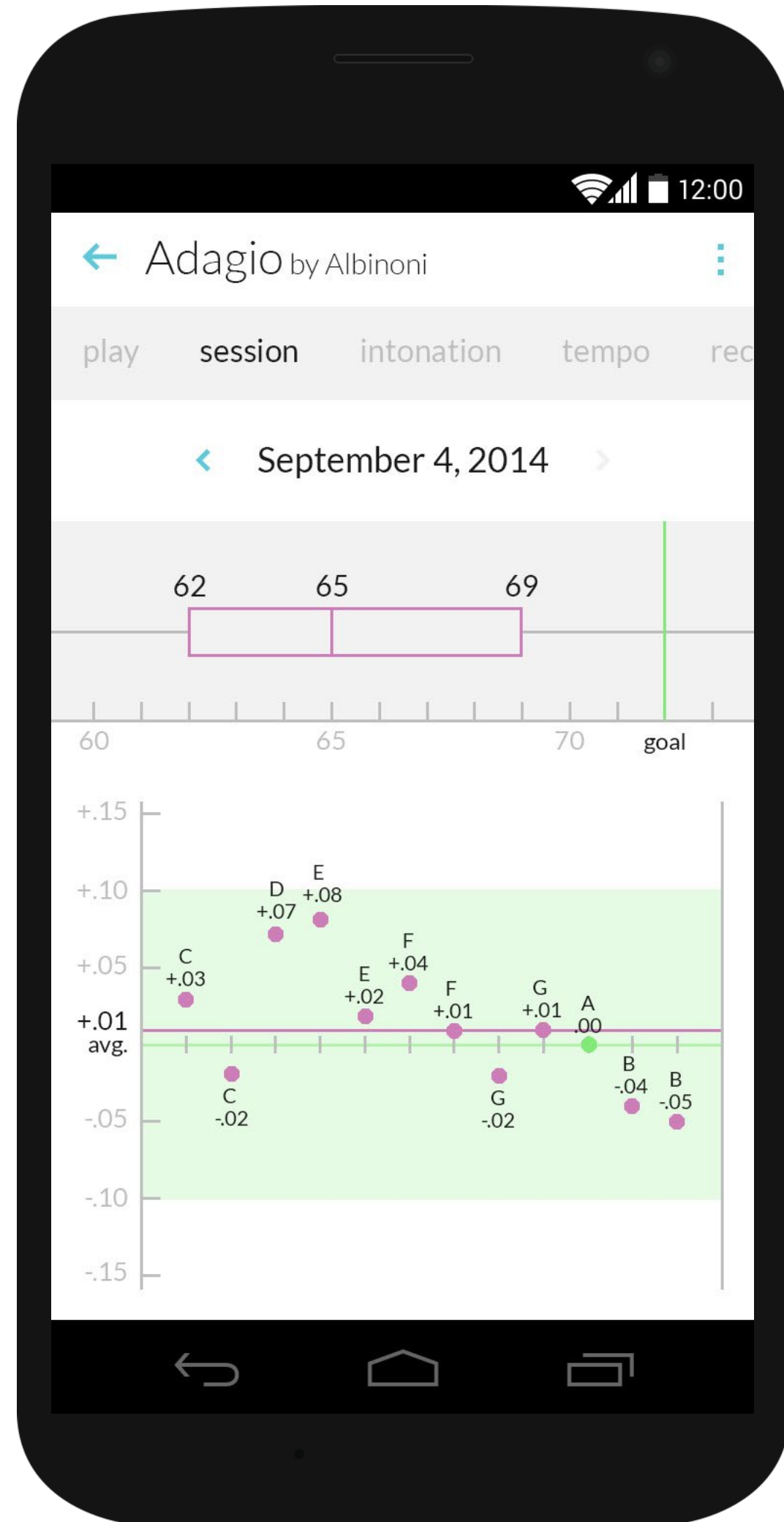


Piece: Play - Recording Saved

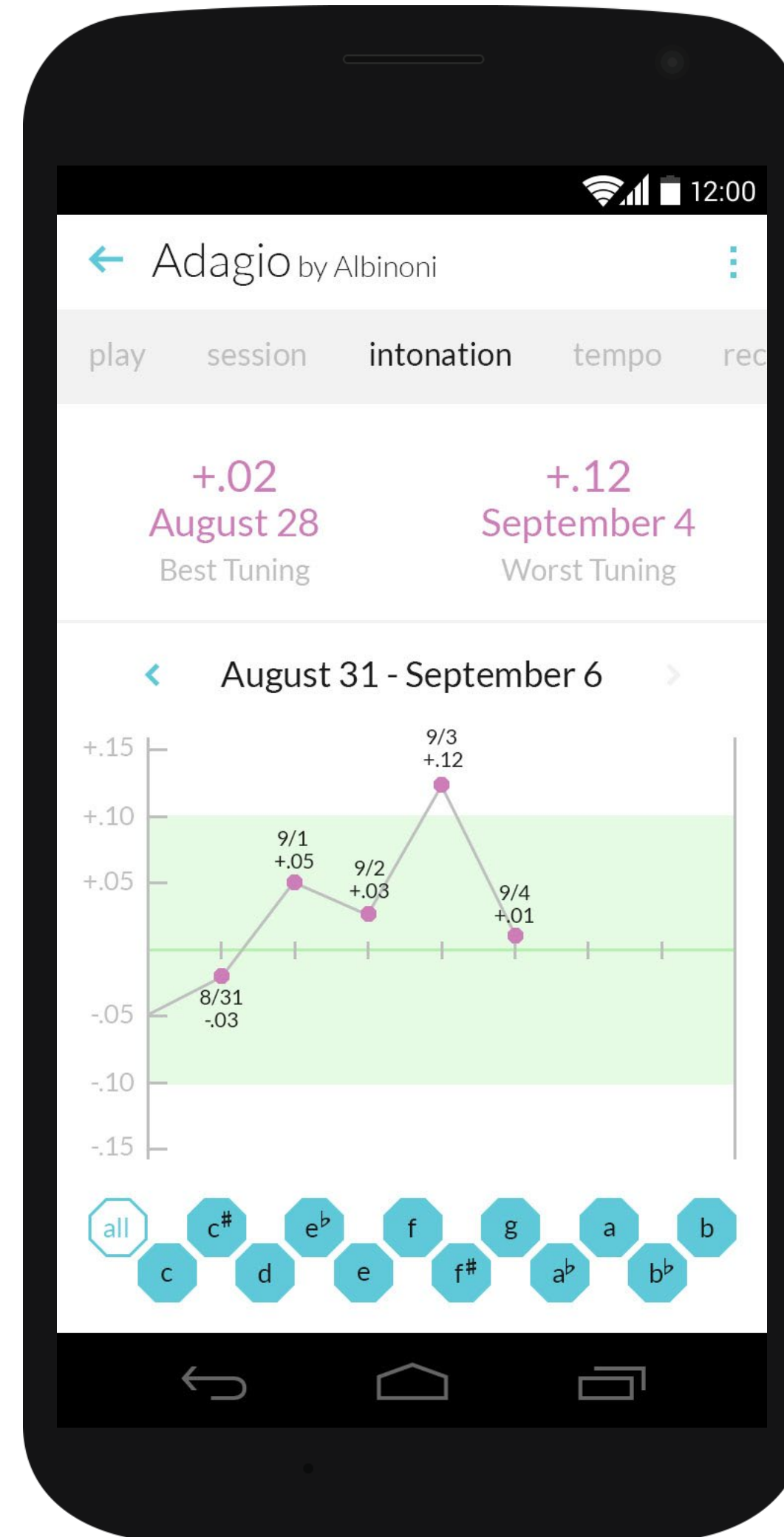


Piece: Session, Intonation, Tempo

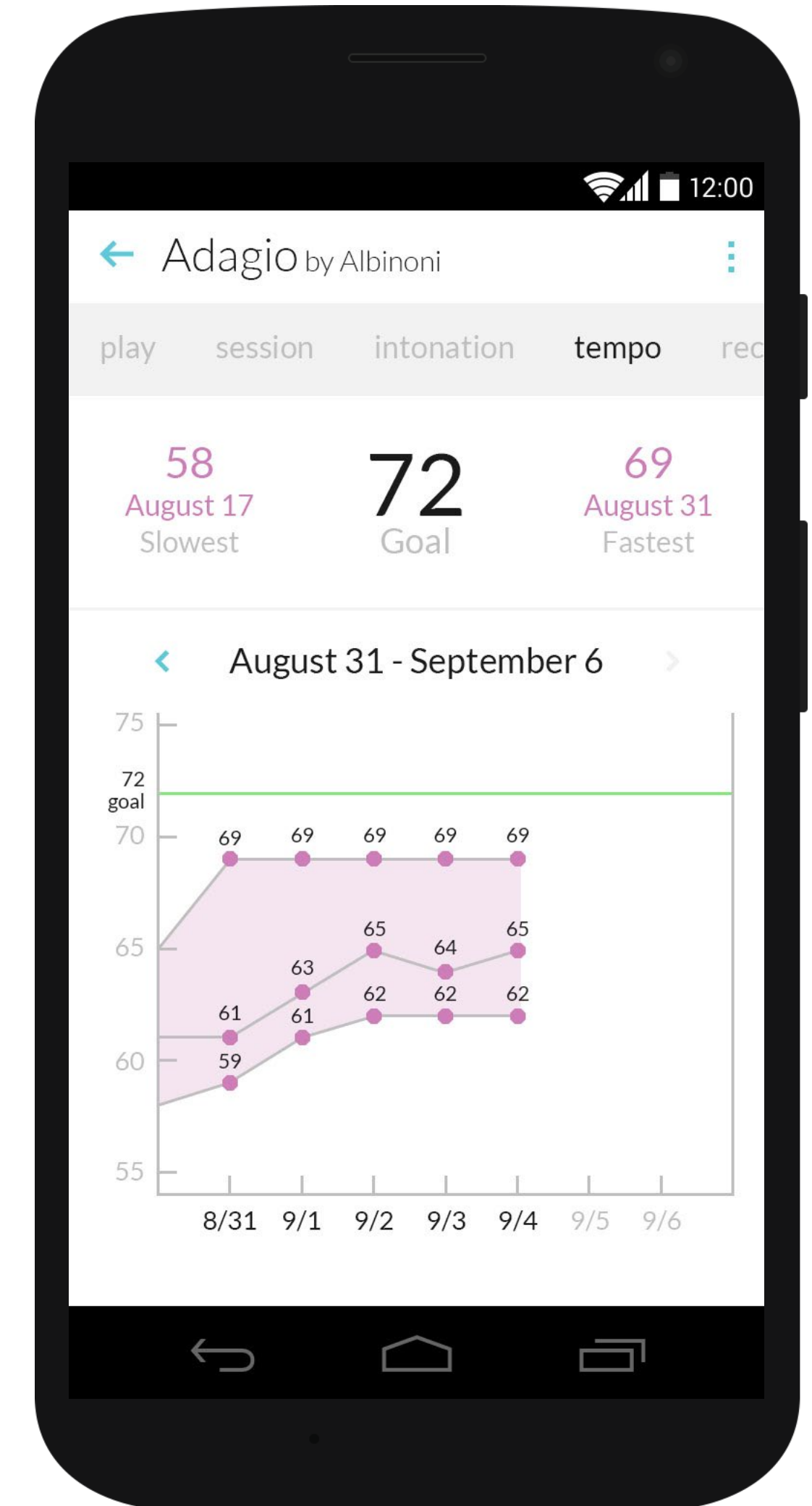
Piece: Session



Piece: Intonation

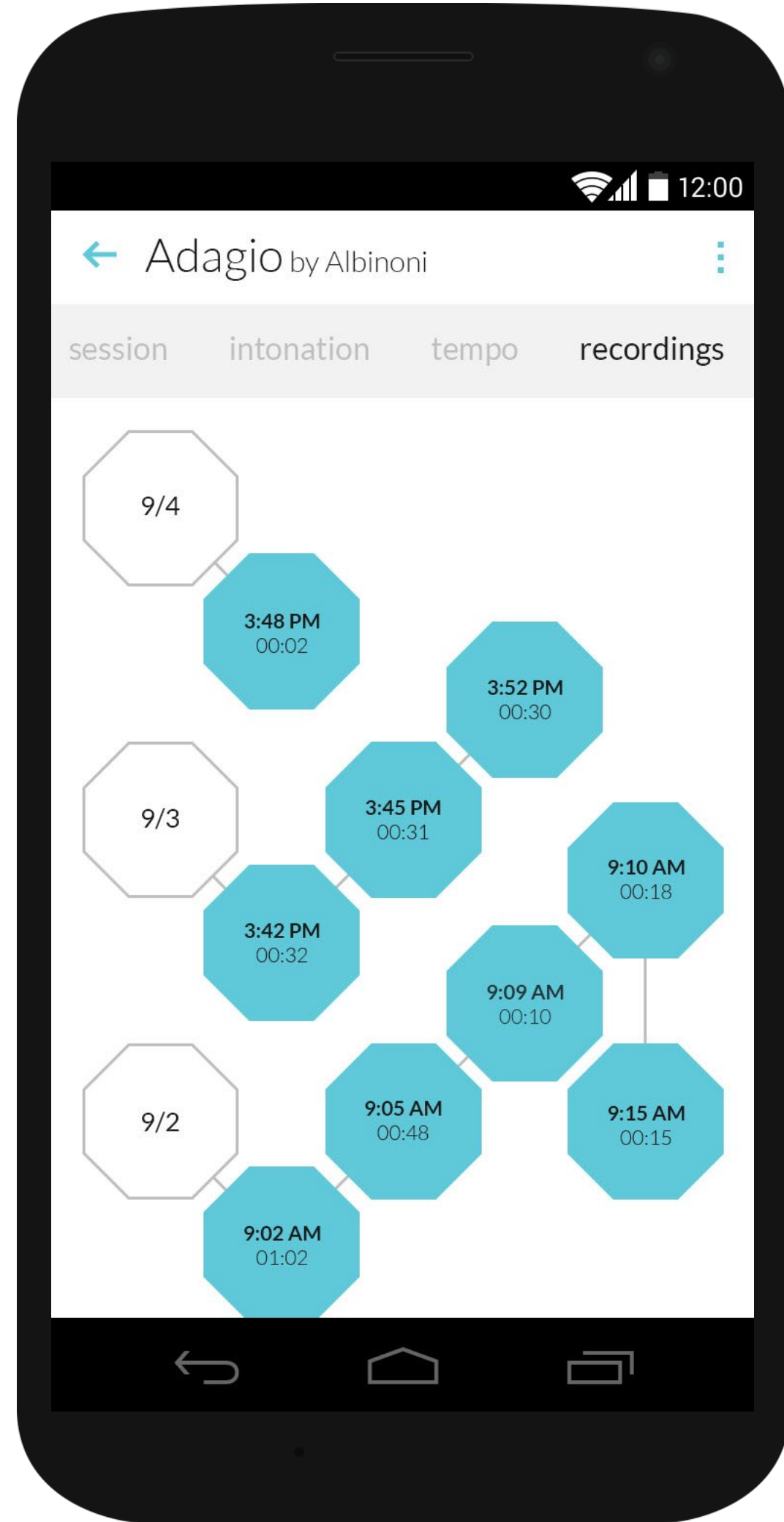


Piece: Tempo

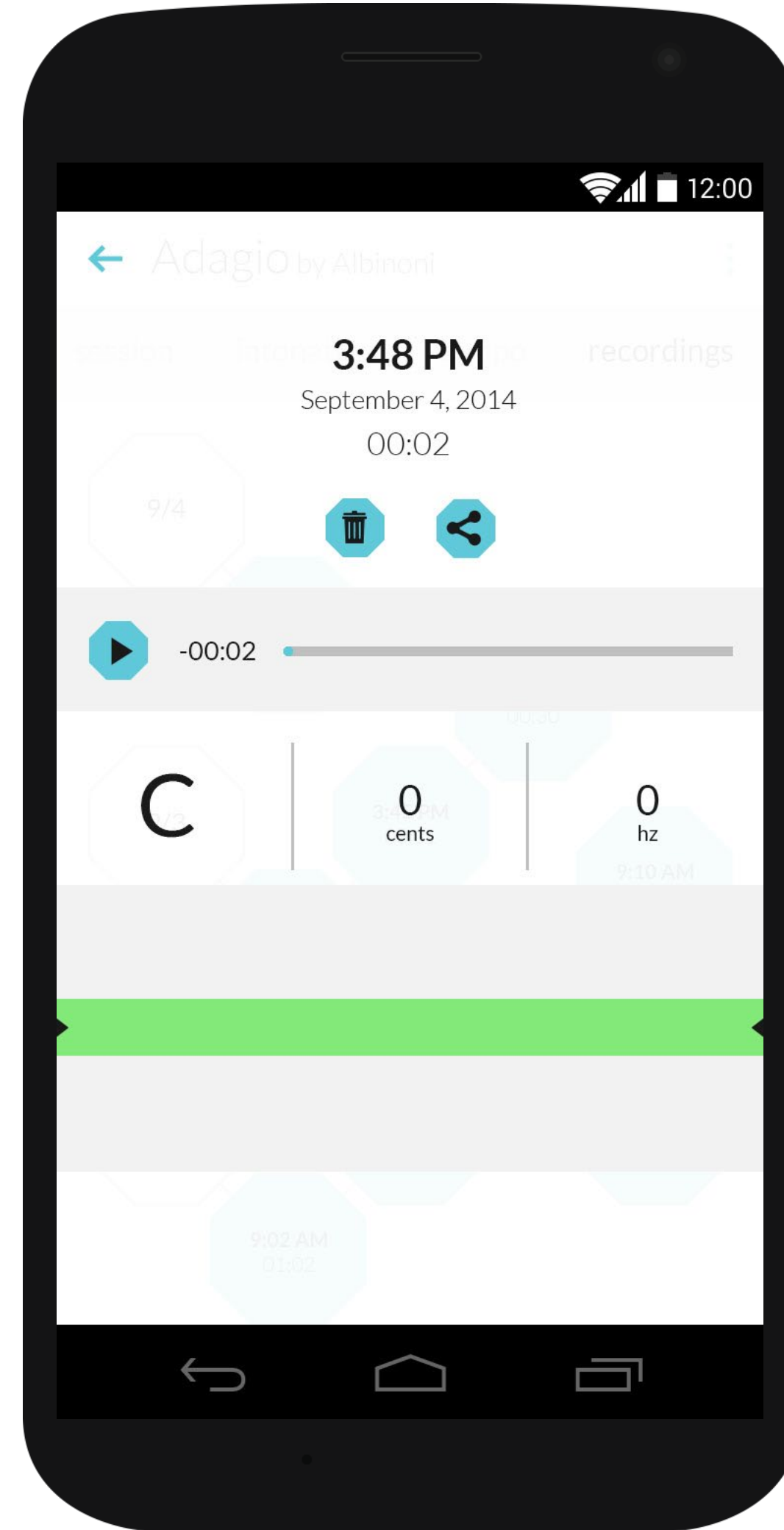


Piece: Recordings

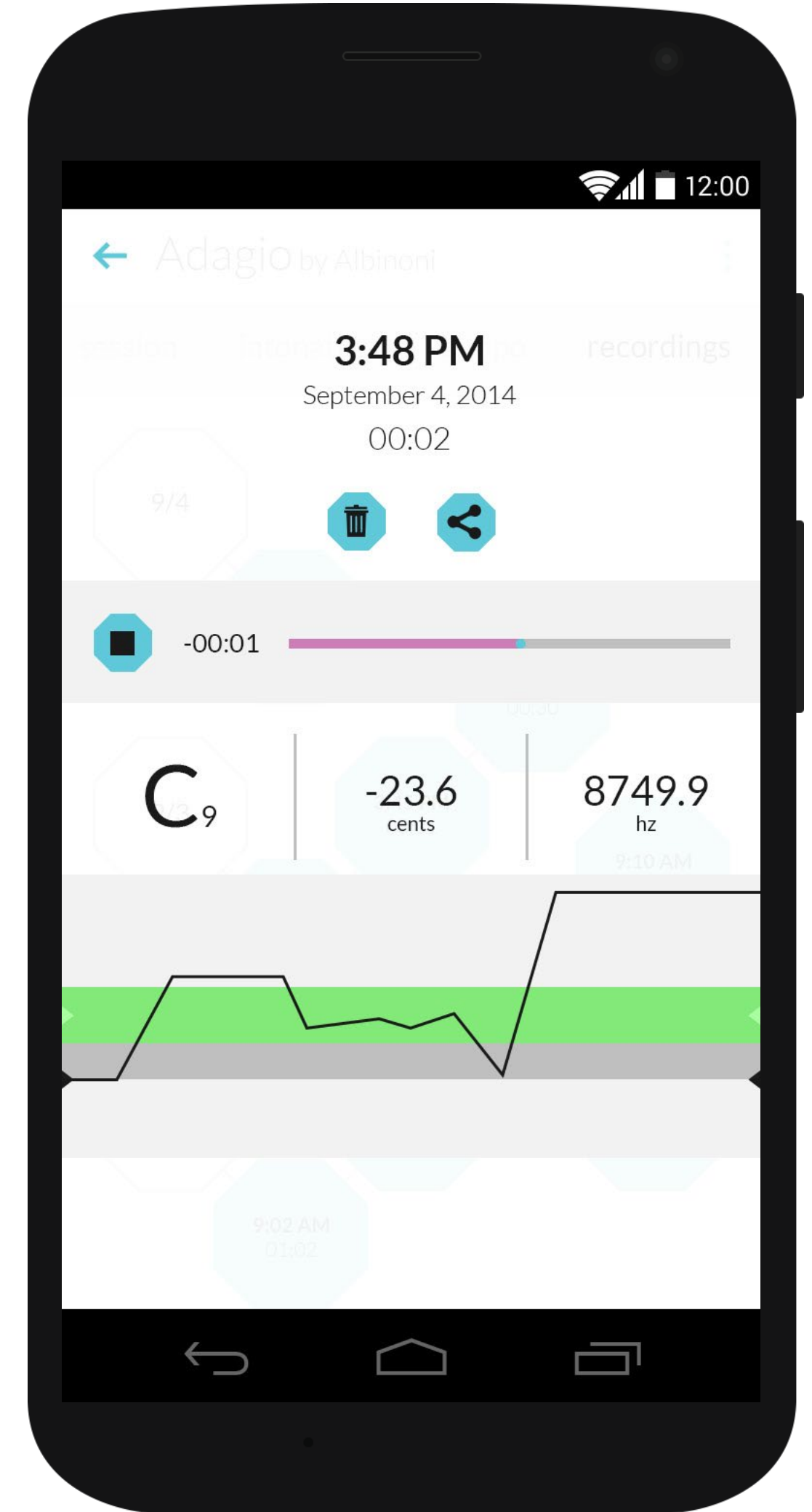
Piece: Recordings



Piece: Recordings - Replay

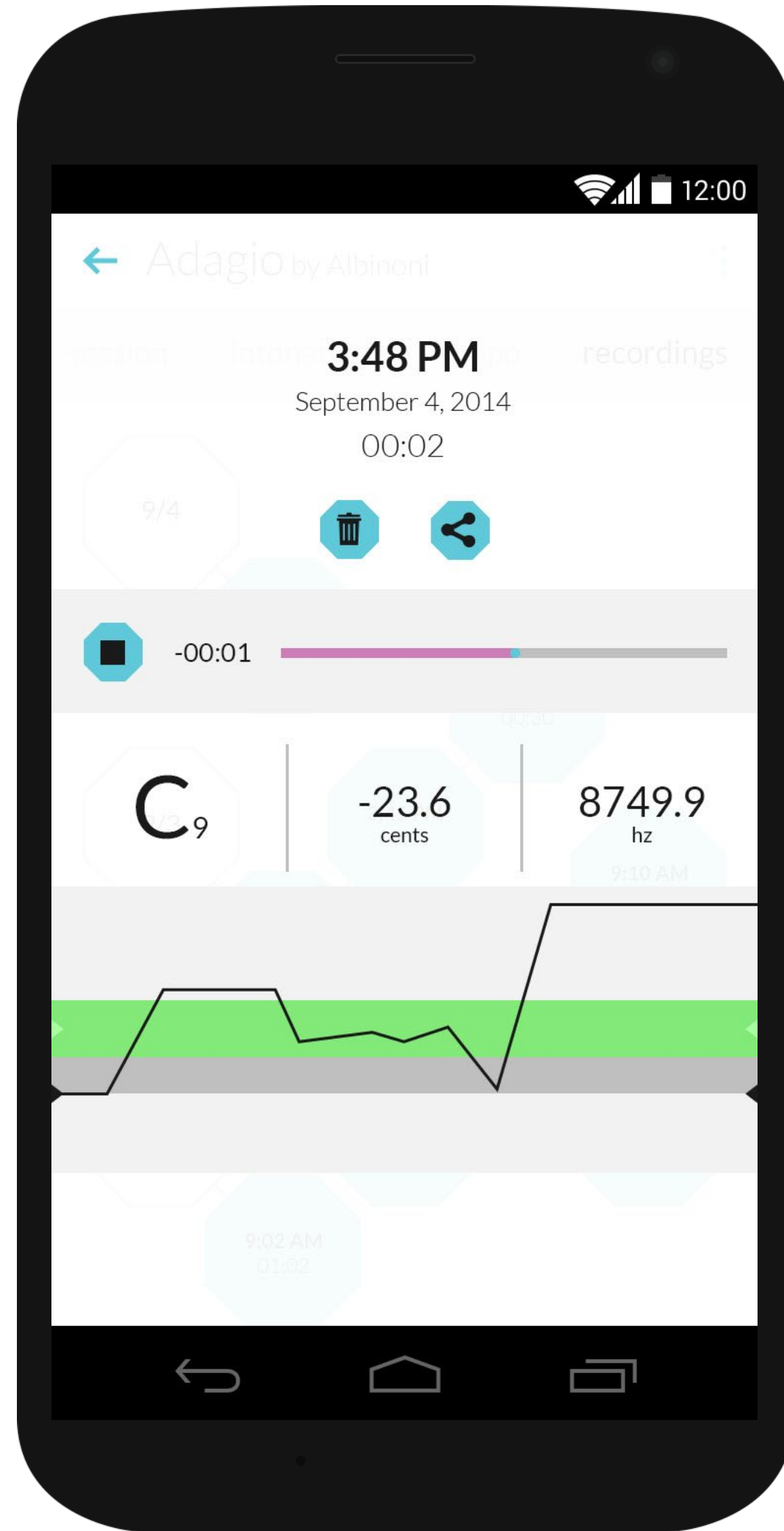


Piece: Replay 2

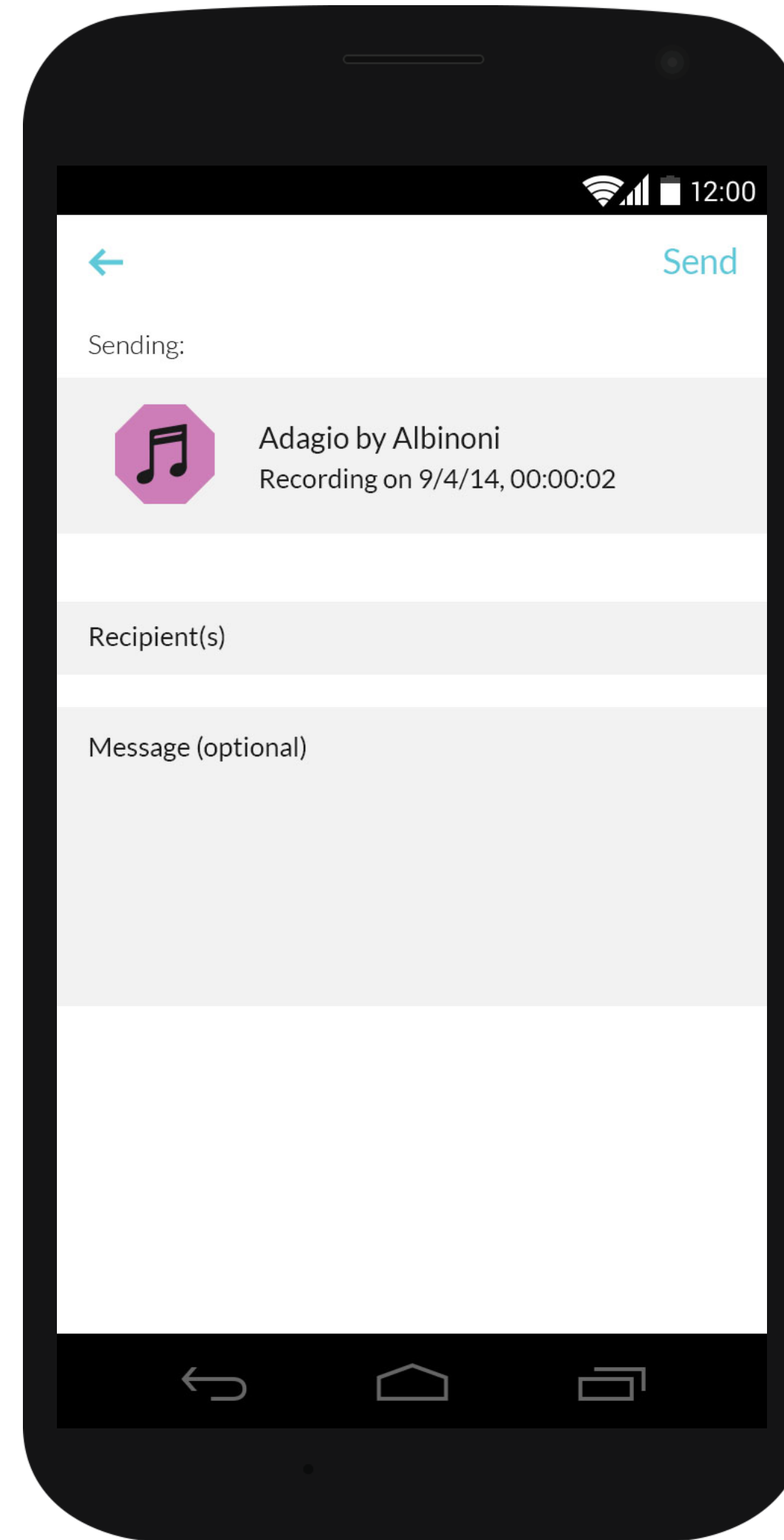


Piece: Replay

Piece: Recordings - Replay



Piece: Send Recording



Prototype

Overview

Storyboard

Overview

This storyboard details the main interactions within Etude that will be featured in the animated prototype.

Interactions Included:

Music Log, Piece Details Pages, Send Recording

Animation Specs:

Duration: 00:50

Screen Ratio: 1920x1080

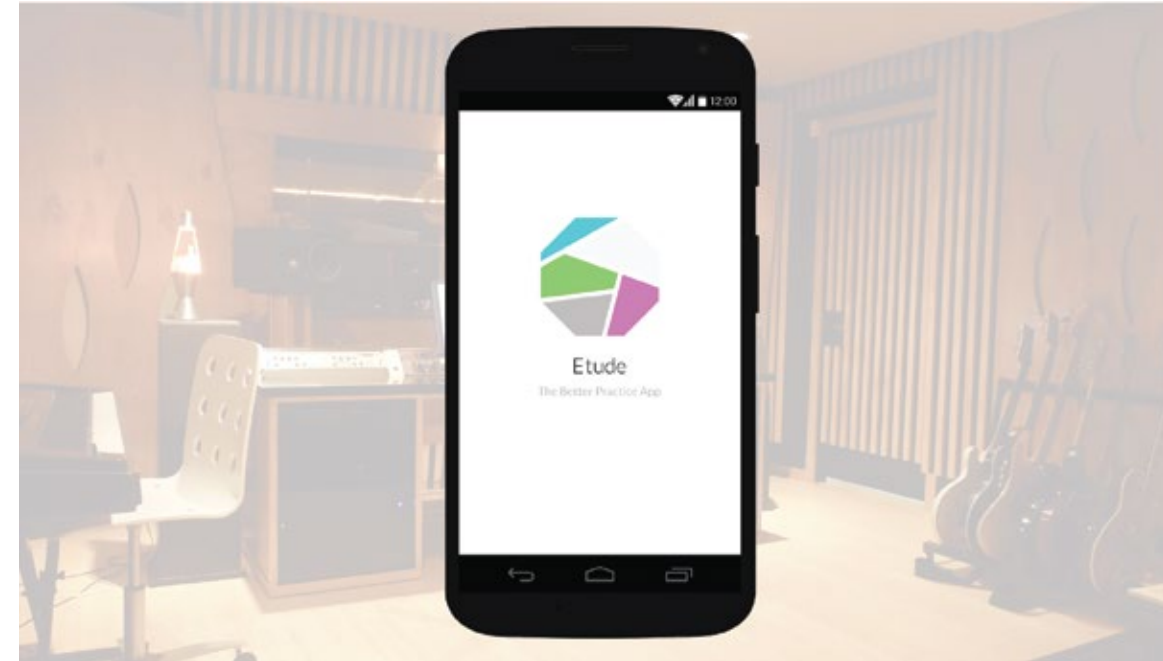
Storyboards 1

1.1



The Etude logo and required information is on an overlay atop footage of a music practice room. The Logo and Name fade into view first, followed by the labeling below, and then they fade out again.

1.2



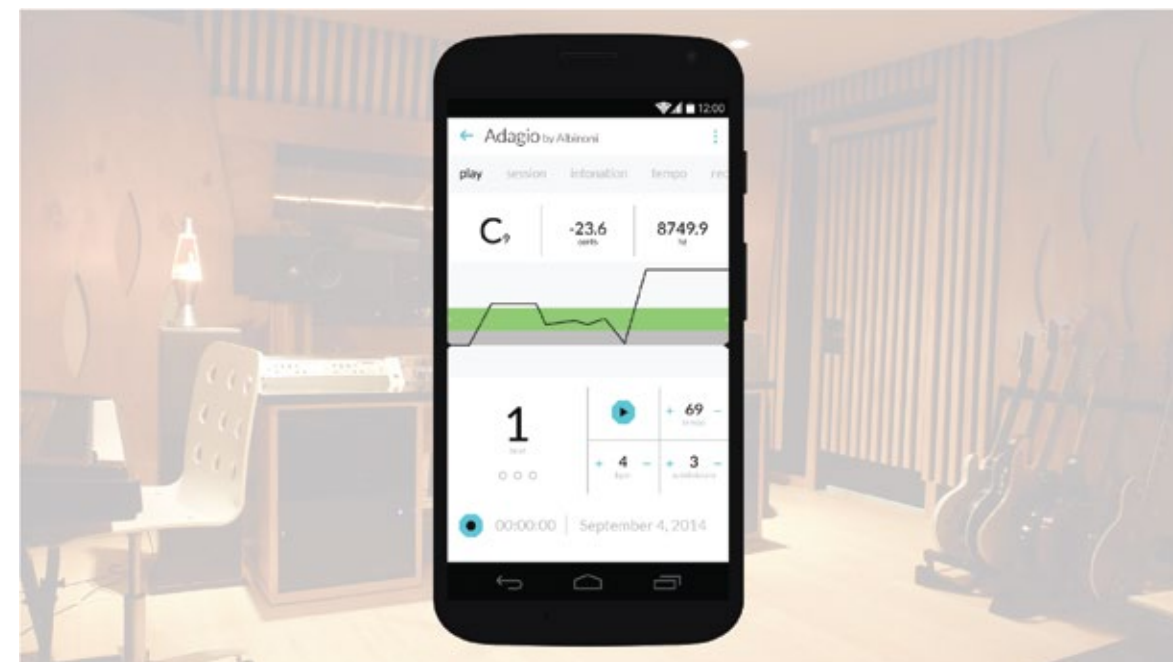
A phone fades into view with the loading screen.

1.3



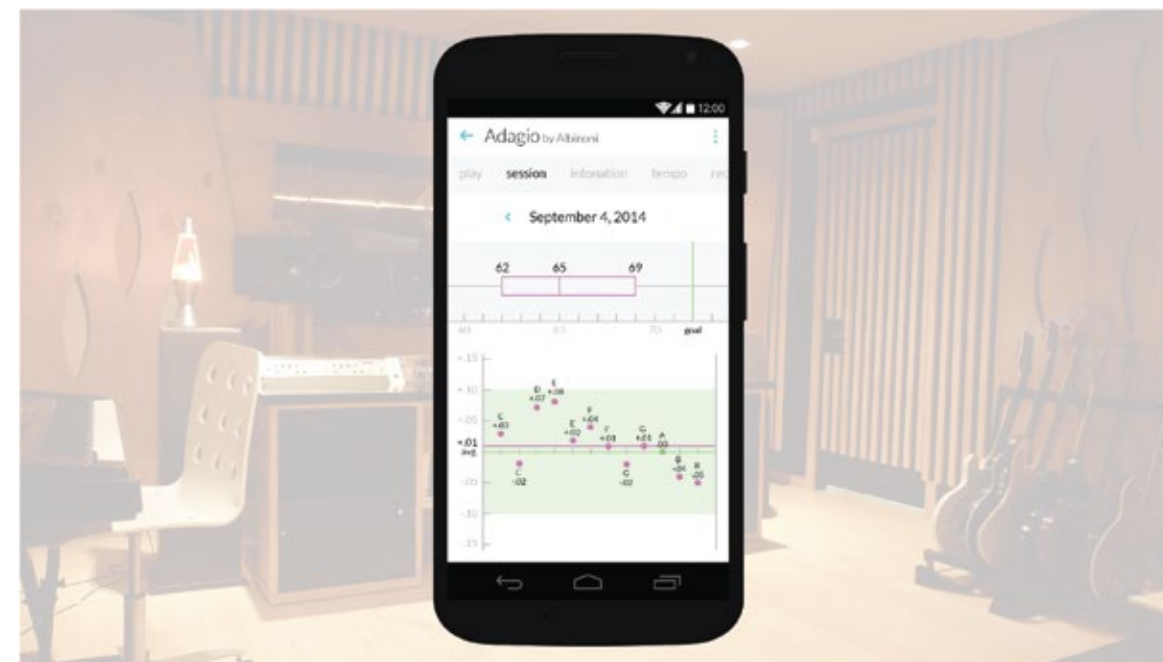
The music log. When the logo fades from the loading screen, the top bar fades in and the music tiles ease in from the bottom of the screen, top to bottom, and when each group is in place the line connecting them traces out. The user scrolls up a bit and taps on the Adagio piece tile.

1.4



The piece details screens slide up on top of the music log. The first screen shown is the Play screen. The tuner reacts to background sounds. The user swipes left.

1.5



The Session screen follows the user's swipe left, replacing the Play screen content. The user taps the left date change.

1.6



The data itself swipes right, replacing September 4's data with September 3's. The user swipes left.

Storyboards 2

2.1



The user swipes past -

2.2



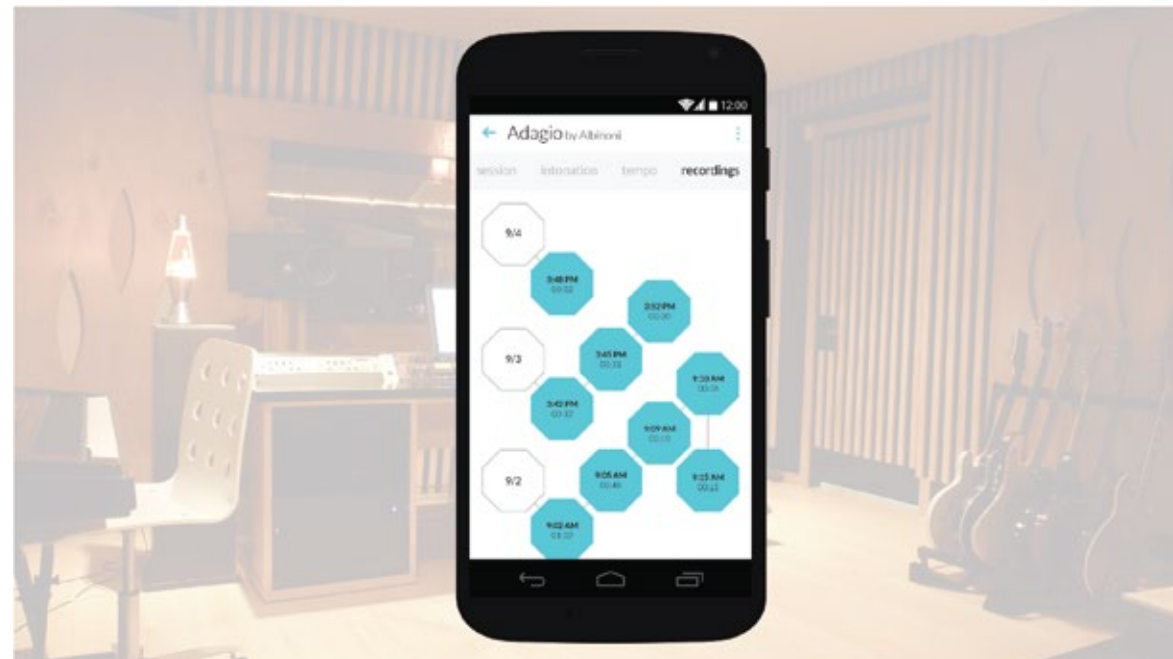
- the Intonation screen -

2.3



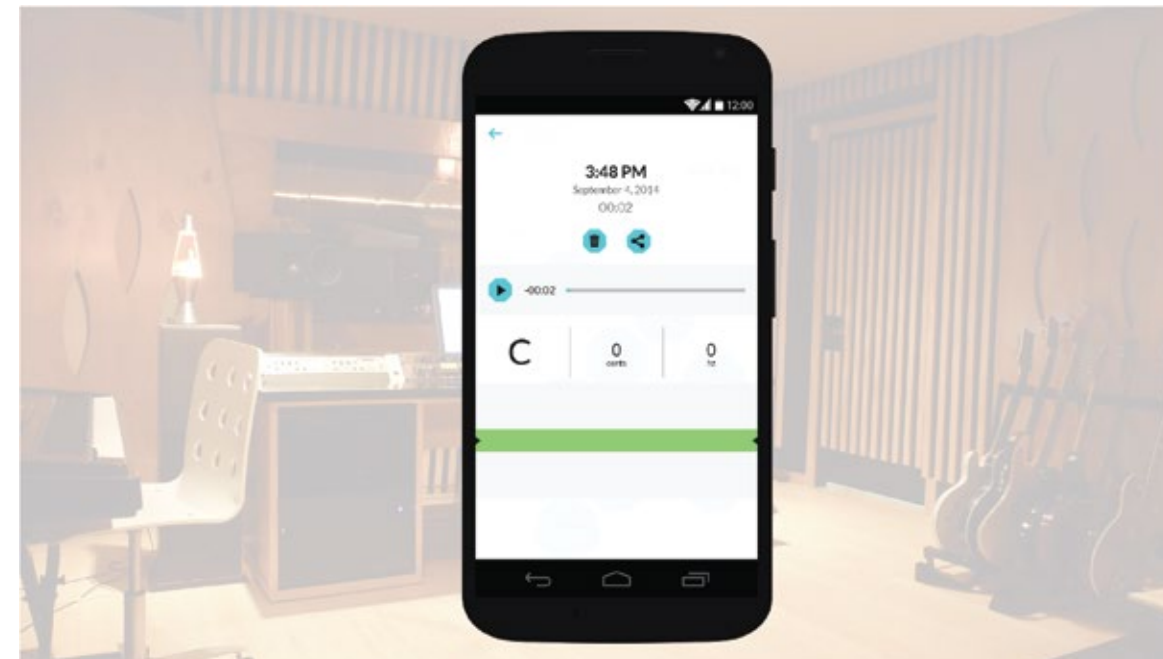
- and pause at the Tempo screen.
The user taps the date change to see last week's data.
The user swipes left.

2.4



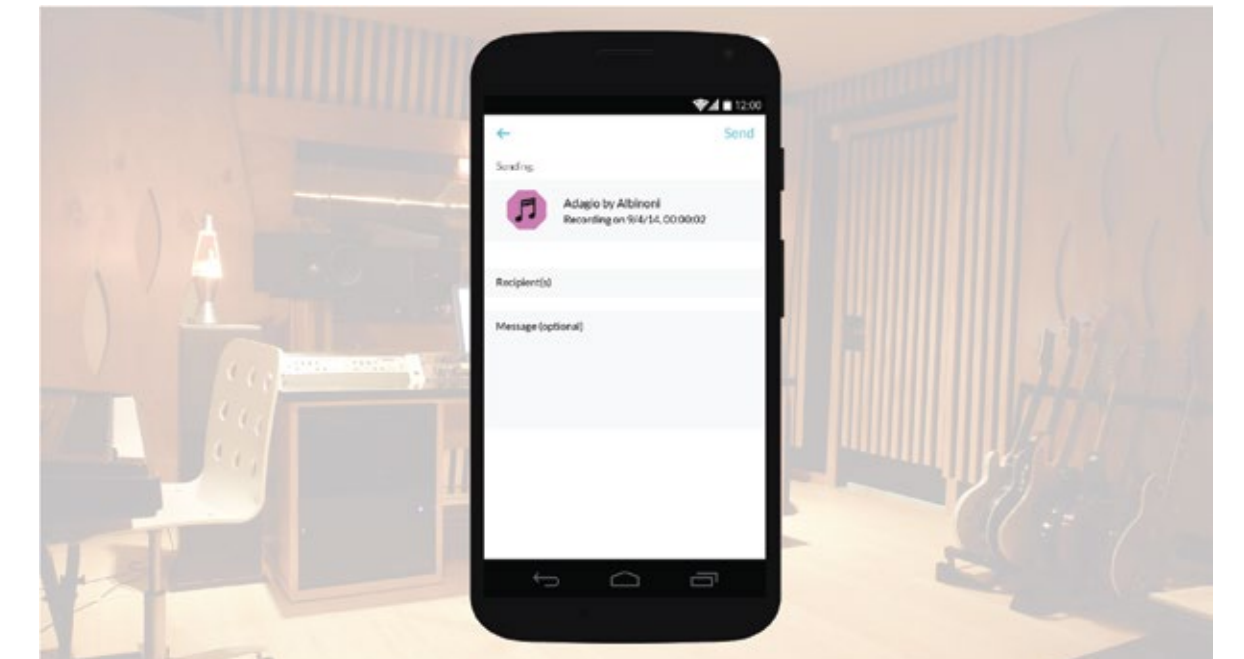
The Recordings screen.
The octagons ease in from the right of the screen like they ease in from the bottom for the screen on the Music Log.
The user taps a recording tile.

2.5



The Replay screen slides up over the Recordings screen.
The user taps the share button.

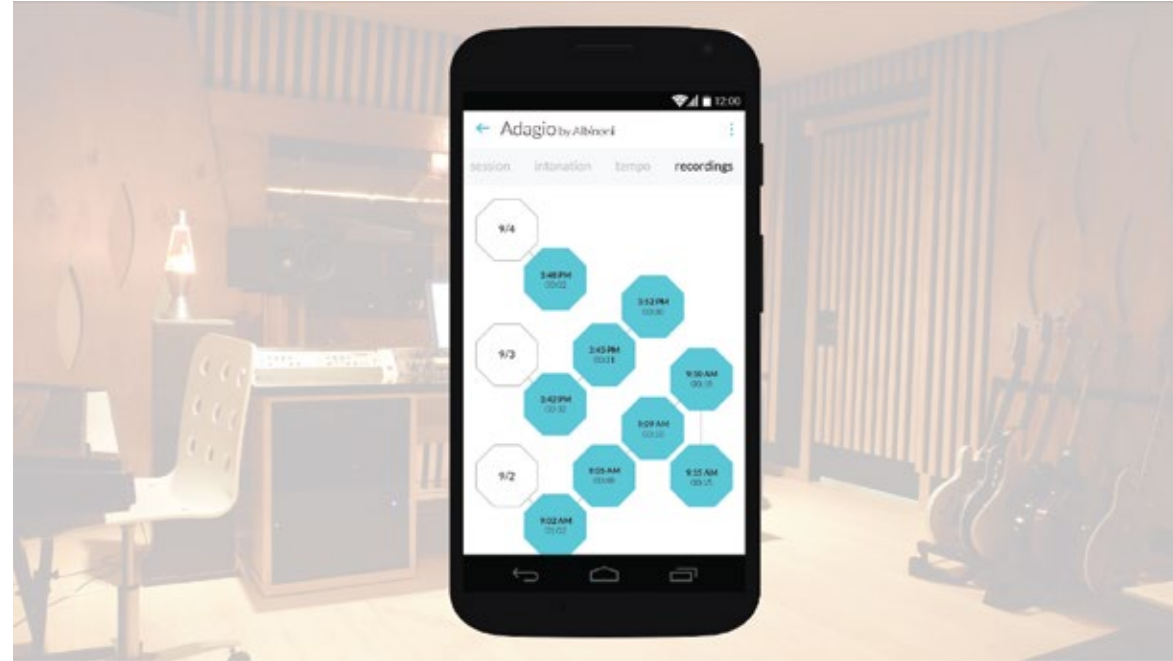
2.6



The Share screen pushes the Replay screen left as it slides in.
The user inputs information and sends it.
The Share screen fades.
The user taps the back button and the Replay screen slides back down, revealing the Recordings screen.

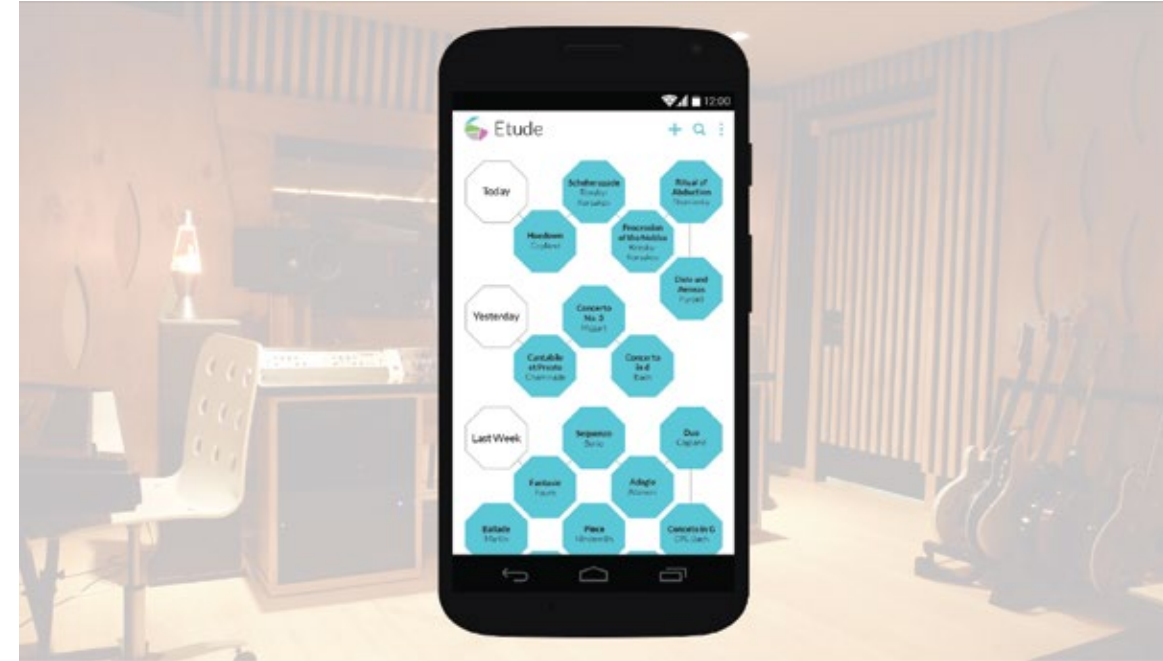
Storyboards 3

3.1



The user taps the back button and the Recordings screen slides down, revealing the Music Log behind it.

3.2



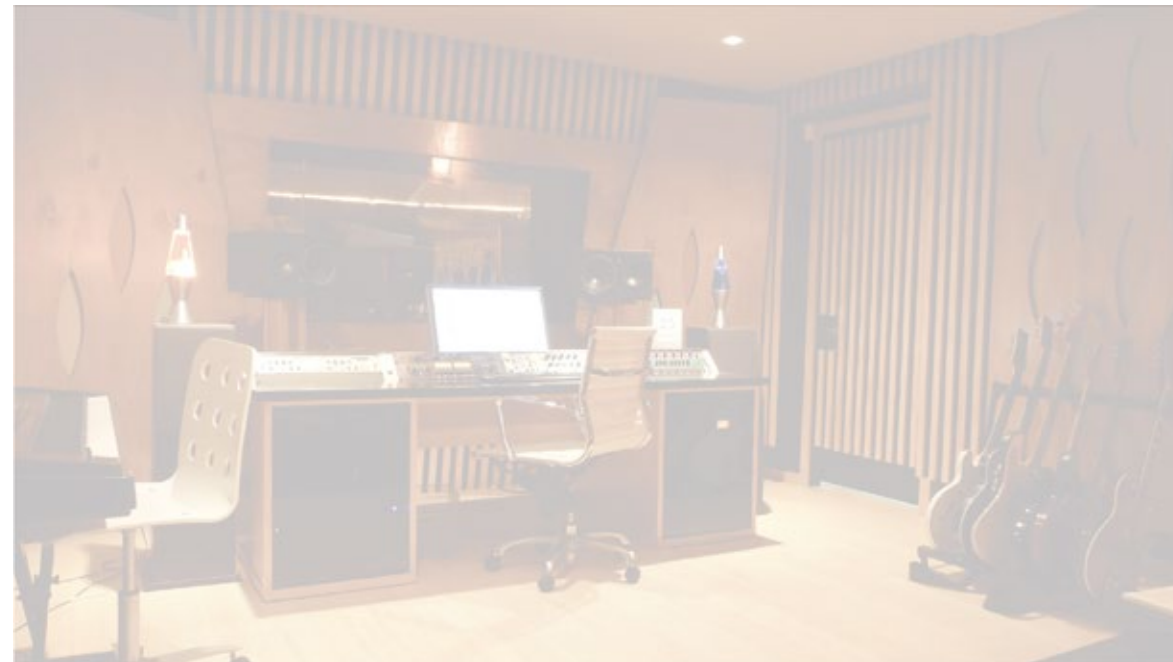
The user taps the settings menu.

3.3



The menu expands out from the icon. The user taps the Log Out option.

3.4



The phone fades from view, leaving the music room in the background.