

## Team Beatle Usability Test Report

To our stakeholders and testers:

Our CS 262 project, Beatle, is a metronome app with the intention of allowing users to practice not just rhythm, but rhythm and tempo changes as well. In order to test our app, we gave our users tasks to complete on the main metronome screen and on the trackbuilder screen of our app. We asked users to change the tempo and beat, to play and pause the metronome, to change the accented beat, and to change the sound of the metronome. We chose these tasks to make sure that our metronome screen is intuitive and that our chosen icons make sense.

We proceeded to ask our users to play back the pre-loaded click track, which required users to navigate to the trackbuilder page. Then, we had users delete a measure from the click track, add two new measures to the click track, and delete the entire click track. Finally, we instructed our users to create a click track for the first five (5) measures of a piece entitled “Drafting Excuses to Talk to Someone”. A stand-out feature of Beatle that differentiates it from other metronome apps is its ability to allow the creation and playback of custom click tracks with varying rhythms and tempos, so testing of the trackbuilder page was imperative.

Our first two usability tests were performed before Thanksgiving Break, before we had a chance to implement some of our intended features. Our users informed us of the following: (a) It would be beneficial if there was a faster way to change the tempo rather than having to repeatedly tap on the + or – buttons; the ability to press and hold the buttons would be useful. (b) The delete button should delete measures upon click, not just after a rerender. (c) The metronome click should turn off when the user switches pages.

The aforementioned changes were implemented following the initial usability tests. Returning from Thanksgiving Break, we performed eleven (11) additional usability tests for a total of thirteen (13) tests. After reviewing our notes, we have the following observations to report: (a) The measure blocks should be movable so that users can change the order of measures in a click track. This functionality will be added in the future. (b) Users should be able to edit measures that have already been created. This functionality will be added in the future. (c) Some users would prefer an actual time signature to be displayed rather than the singular “beat” number. Note: Some users noticed that our example piece, “Drafting Excuses to Talk to Someone”, switched from 11/4 time to 3/8 time, which requires a manual “tempo change” that isn’t noted in the sheet music to account for the change in meter. We are currently brainstorming ways to account for changes such as this one. (d) The + and – buttons, although they can now be held down to increment/decrement faster than tapping, are still slow. User suggestions included faster push-down buttons, a slider or wheel to change the tempo/beat, or the ability to type in numbers from the keyboard. (e) Our “blank circle” is supposed to mute the beat, but it is currently not functional. It isn’t clear that a blank circle is supposed to represent silence. One user suggested adding a dash ( – ) or musical rest symbol instead of using a blank circle. (f) Users consistently would select a measure on the trackbuilder page with the intention of adding a measure after their selection. We have updated the app so that measure addition does, in fact, work this way. (g) A user noted that our snap sound had significant unevenness when switching between the accent and the standard sound. We have since fixed this. (h) We still need to implement the looping feature in the trackbuilder; it would be nice to add multiple measures with the same stats at a time. (i) A “Delete all measures” button could be useful. (j) Users still cannot save their custom click tracks. We are currently working on this aspect of functionality.

Many thanks to all of our stakeholders and testers who agreed to participate in our usability testing! Your feedback is helpful and is actively being used to improve the Beatle app.

Thank you,  
Team Beatle (Abigail, Emma, Lexi, Caden)