

LOVESTEP
Mobile Music Collaboration

The Team

Joseph Hernandez – Team Manager
Igor Berman – Development
George Kennedy – Design
Scott Buckstaff – User testing, documentation

Problem and Solution Overview

Music collaboration is easy: just get a couple instruments, sit in a circle, and jam. But what if you don't have instruments? What if you compose your music solely on a computer? It becomes much more difficult to collaborate when you have to pass your only instrument back and forth between the collaborators. Something is lost in the collaboration when there is only one person working on the song at the same time. Our solution is to tear down that wall between the collaborators, and make it so two people on separate devices and easily interact with the same composition. Furthermore, just as an expert guitarist can sit down and have a jam session with a novice, we want to be sure that electronic musicians of all levels of musical expertise can interact with our musical interface in a satisfying way.

Contextual Inquiry Customers

Who?

We decided that the most important distinguishing factor between our contextual inquiry customers should be their level of musical proficiency. We want our application to be universally accessible to new musicians but also not boring to experienced musicians. In order to get the perspective we need, we need to find people with a smattering of musical proficiencies.

How recruited?

In order to best target musical proficiency levels, we searched through our own social networks. Effort was made to choose three people with very different backgrounds who did not know each other.

Background?

We wanted to find one person with low musical proficiency (effectively no understanding of music theory), one with medium musical proficiency (basic grasp of theory, may play an instrument), and one with high musical proficiency (plays multiple instruments, perhaps performs occasionally).

Skills?

In addition to the previously stated musical skills, we wanted our contextual inquiry customers to all be technologically enabled. This application is not for those who still struggle to text with Emojis.

Contextual Inquiry Results

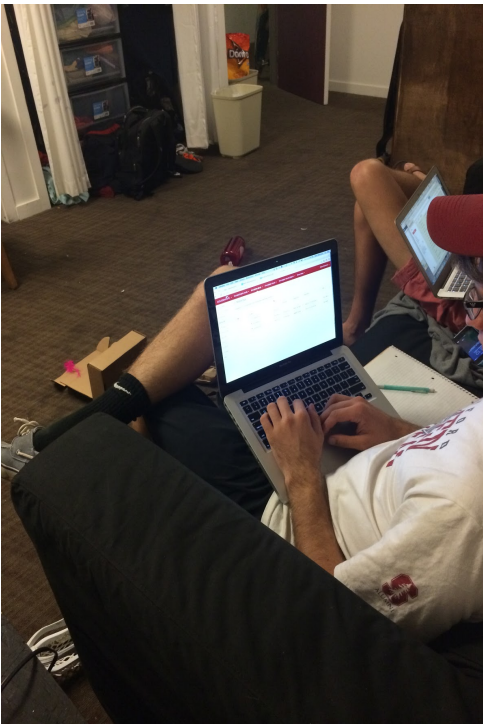
Abi McBean (Low musical proficiency)

Abi is the type of consumer that has minimal musical creation experience but would thoroughly enjoy an application in which she could make music. She would prefer if the key and scale was chosen for her, so she could mess around easier. A step sequencer would be preferable for her. When asked about preset loops, she was rather skeptical on the idea. She emphasized uniqueness in tracks was important. She really likes the idea of playing with friends as well. As a college student from Vanguard University, Abi is definitely in our target audience.



Daniel Ron (Medium musical proficiency)

Daniel Ron is a sophomore on the Stanford Sailing team with an undeclared major. He will most likely declare MS&E or Product Design. Daniel is a member of the school's greek system and avidly enjoys listening to modern electronic music. Daniel uses music to get him in the right mindset to do the activity at hand. Whether its warming up for a early morning workout, going out for an afternoon practice, studying, or simply enjoying the night, Daniel turns to electronic music to get his juices pumping. While looking for people to interview we heard "Martin Garrix" playing from Daniels room and asked Daniel if he was willing to be interviewed. Daniel, as a college student with an interest in electronic music, is in the center of our target audience.



Daniel felt that the concept of LoveStep was great. He saw that there was a void that LoveStep could potentially fill in. He was also able to help us determine the desired complexity of the app through his answers to our questions. He stated that he would like to see that app be able to accommodate users from a wide range of technical ability. In essence he felt that we should design LoveStep in a way that the user can make the app as technical or as simple as he or she

wanted. He thought that turns could be a fun addition but he also felt that simultaneous mixing would be the way to get the truest form of a “jam session”.

Joel Gottsegen (High musical proficiency)

Joel is a senior at Stanford University with a lot of musical experience. He plays drums, raps, sings, and plays guitar in a band. He has been playing music for most of his life. His interview consisted mostly of testing out different musical interfaces to see what his thoughts were. The musical interfaces varied on the spectrum of ease of use. The easiest interfaces abstracted away theoretical details and made it difficult to make music that sounded bad. The hardest interfaces gave you the most musical control.



We just sat back and let Joel play with the interfaces and talk about what he liked and didn't like. He spent some time with the easier interfaces and clearly enjoyed having the freedom to play anything the interface supported and have it sound good. However, it appeared to us that he more greatly enjoyed the more advanced musical interfaces in which he could play anything that came to mind.

Task Analysis Questions & Answers

Who is going to use the system?

In general, our customers will be absolutely anyone with the desire to make music with friends. More realistically, we expect a technologically-enabled crowd of age 13 to 30, possibly containing a large proportion of people without any musical proficiency.

What tasks do they now perform?

Some already play an instrument and are familiar with recording and playing music with others. Some release their music. Many play no music at all, but are interested in the possibility. Almost all are avid music listeners.

What tasks are desired?

The ability to make music easily, and the ability to enjoy music in a group. People seem to be interested in recording unique and harmonic tunes with friends and exploring musical styles. They have been put off by the large learning curve

required to actually sound good with an instrument, and are looking for something that is easier to pick up.

How are the tasks learned?

The task of creating music and enjoying it is almost entirely facilitated by the process of experimentation. People need to be able to easily play with ideas (you could say, they need to make rapid prototypes) and see what they do and don't like.

Where are the tasks performed?

Dorm rooms, friends' houses, recording studios, the outdoors, parties. On users' phones, on users' computers. Music can be played and experienced in almost any location.

What is the relationship between the customer and data?

Customers create and consume sound data.

What other tools does the customer have?

Customers can already share their music in a number of ways. They can use simple file transfer services like email or Google Drive to send music files directly to other people, or they can use sites like SoundCloud to post music online for anyone. Many extremely sophisticated Digital Audio Workstations already exist for the creation of electronic music. As far as we know, there is no tool out there that was designed with music collaboration in mind.

How do users communicate with each other?

Some users send music directly to others or they post it online for anyone to come across and see.

How often are the tasks performed?

Musical tasks are performed at leisure times. Most people listen to music every day, while musicians play music a couple of times per week. Music is a hobby, and is done in people's free time.

What are the time constraints on the tasks?

People can only create music in their leisure time unless they play music professionally. Furthermore, unless their work environment allows it, most people can also only listen to music in their leisure time.

What happens when things go wrong?

Users stop having fun if things go wrong with their music creation software. Data, and hard work, can be corrupted or lost. Furthermore, since this software is for entertainment purposes, if things go wrong and users get frustrated, the software will simply not be used.

Representative Task 1 (Simple)

Customers should be able to easily save and share the music that they have made with our application. This idea stemmed from Abi's interview, when she seemed to get very excited with the simple song she made with a simplified musical interface. If our customers make something they are proud of, we need to be sure that they can share it if they want to.

Representative Task 2 (Medium)

Customers should be able to create music collaboratively. This requires network programming.

Representative Task 3 (Hard)

All customers should be able to easily synthesize satisfactory beats, melodies, and sounds.

Three Best Application Ideas

Idea 1: GoogleDocs for GarageBand

Users can come together to work on the same "GarageBand"-like file simultaneously. Musical interfaces are advanced enough to produce some high-quality songs. Advanced users will have all of the power they need to make what they want, and basic users get as many tries as they need to get things right.

Idea 2: Make it a Game

Players choose opponents and play against them with virtual instruments. They are given timed tasks like "play a drum beat with two kicks and a snare," and then their results are compiled together into a song. Advanced will enjoy the gamified simple interface, and basic users will be so focused on the game that they will unwittingly make music.

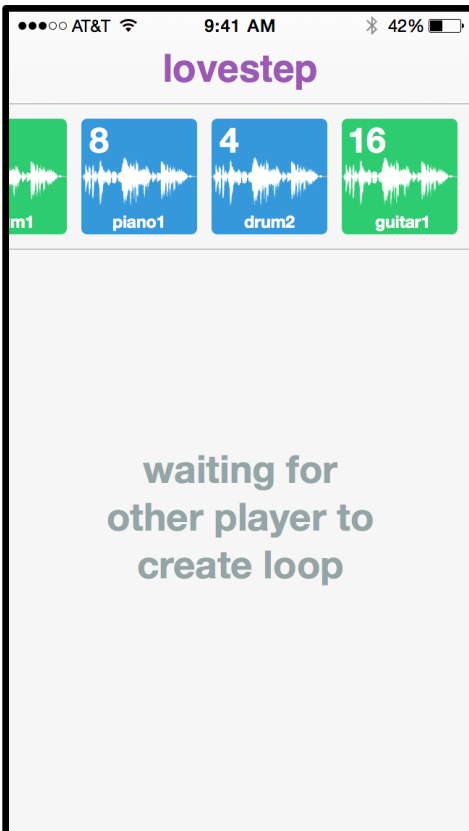
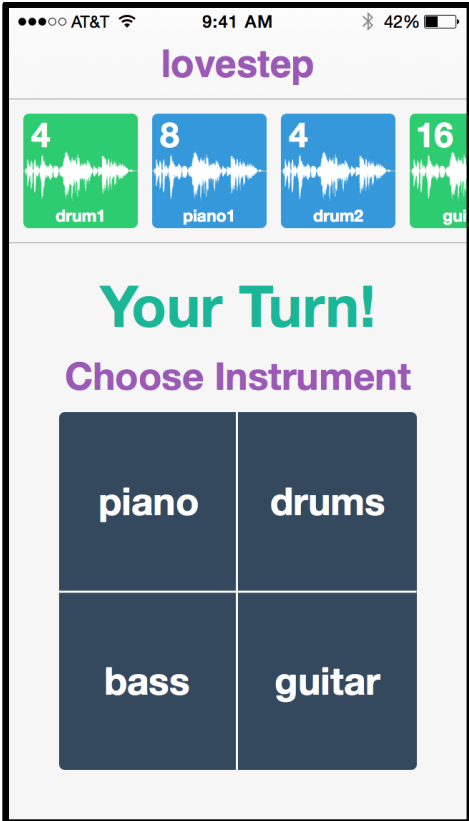
Idea 3: Simultaneous Simple Collaboration

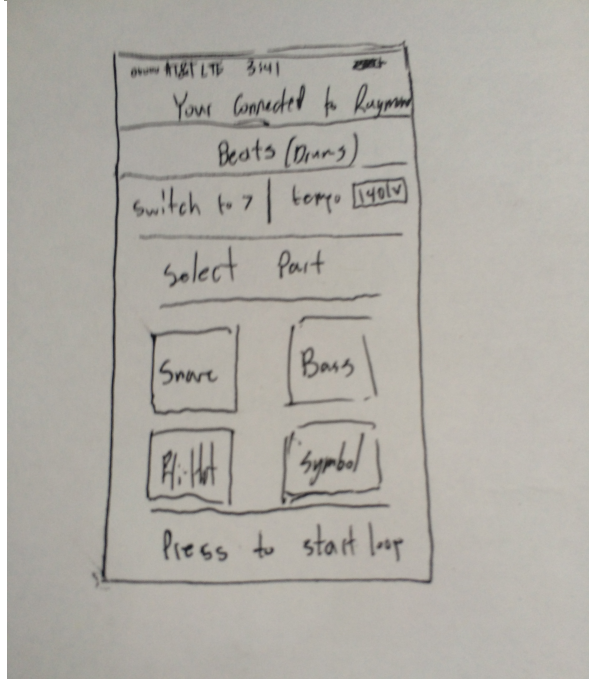
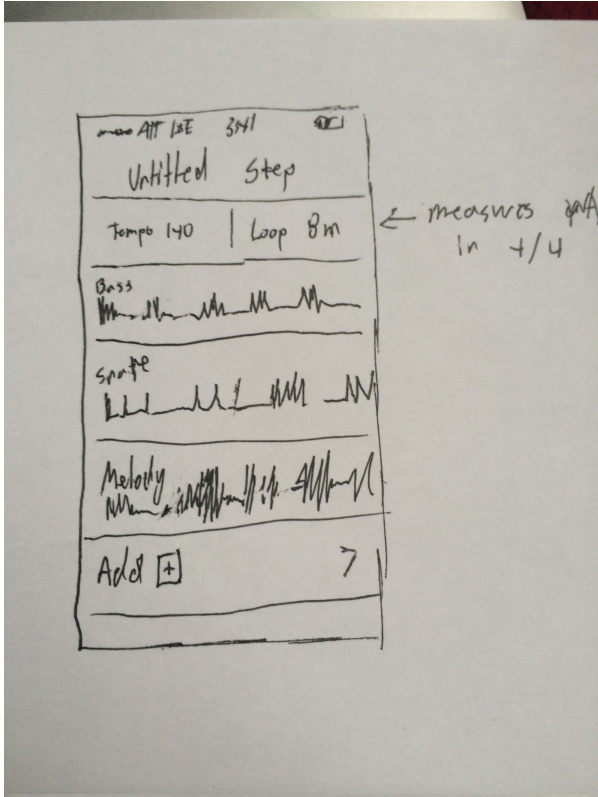
Users choose fellow collaborators and play with them with virtual instruments. This is very similar to the game idea, but there is no formal requirement for the types of music that the users must play. Music creation is a much more relaxed, freeform process and there is no competitive edge. The interfaces are simple and abstract away difficult parts of music theory in order to make it difficult to make anything that sounds bad.

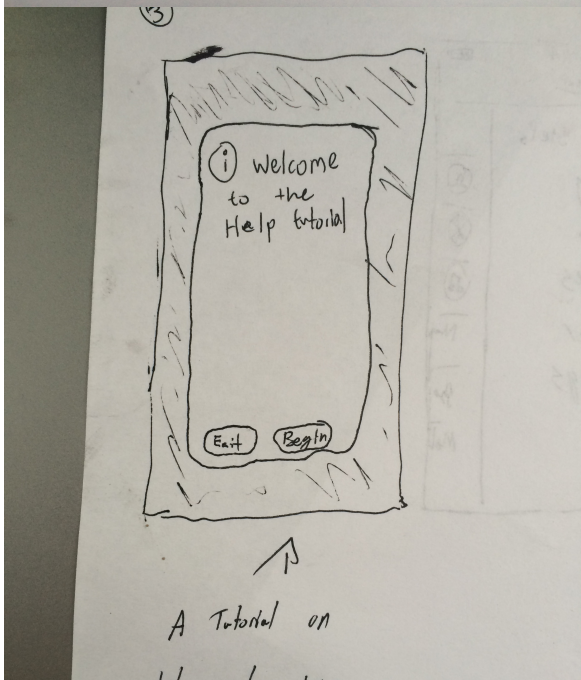
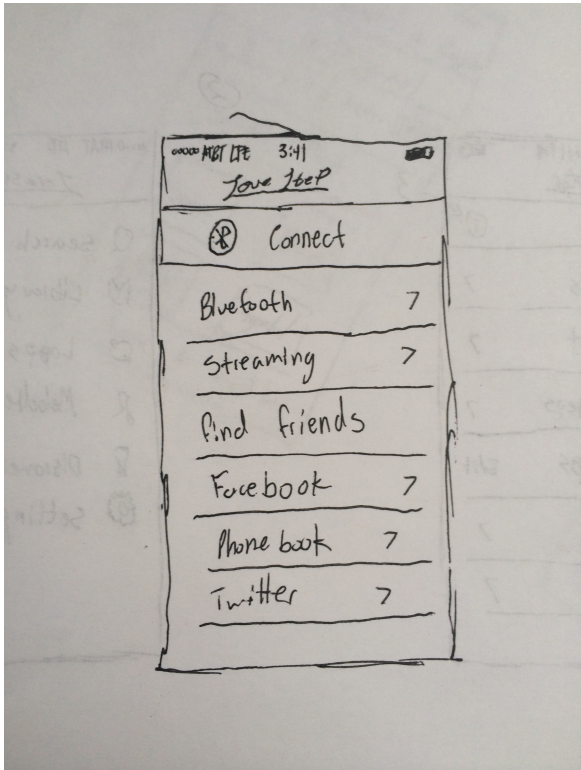
LOVESTEP – Mobile Music Collaboration

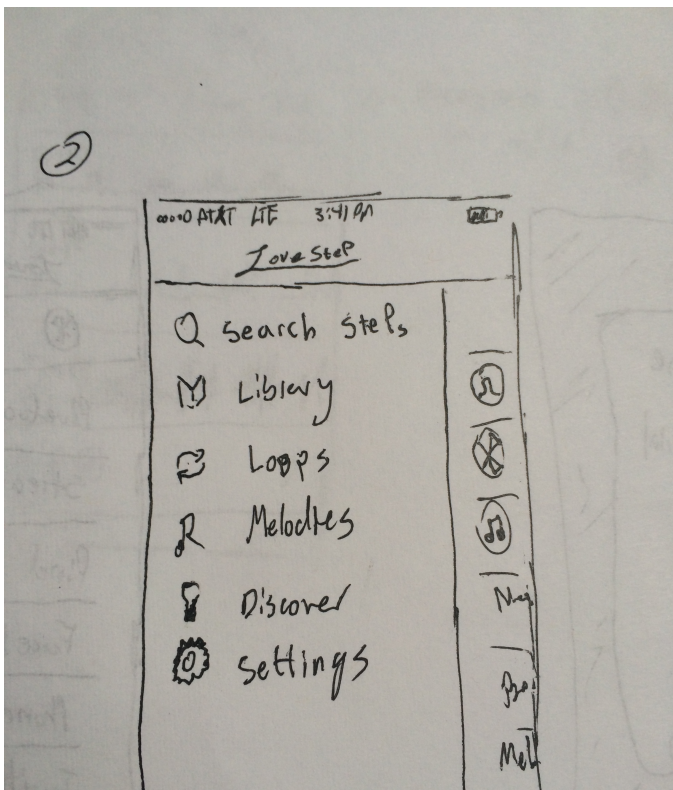
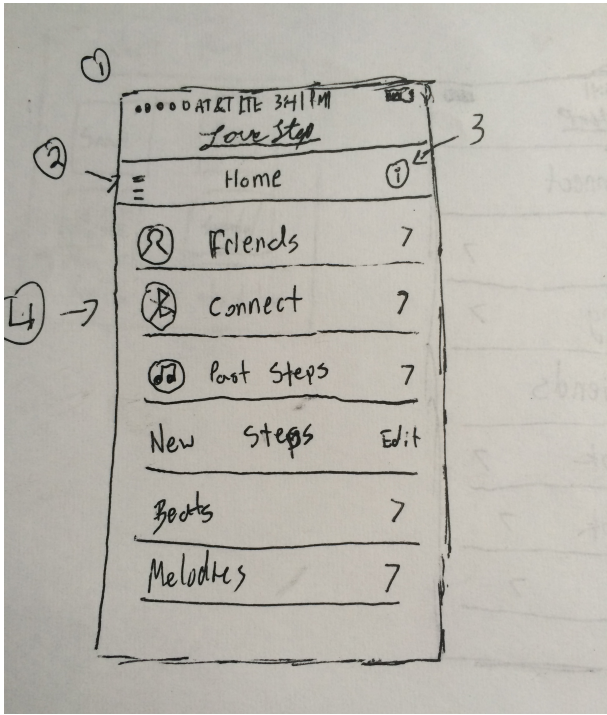
	GoogleDocs for GarageBand	Make it a Game	Simultaneous and Simple
Significance	medium	medium	high
Feasability	low	medium	high
Interest	low	medium	high

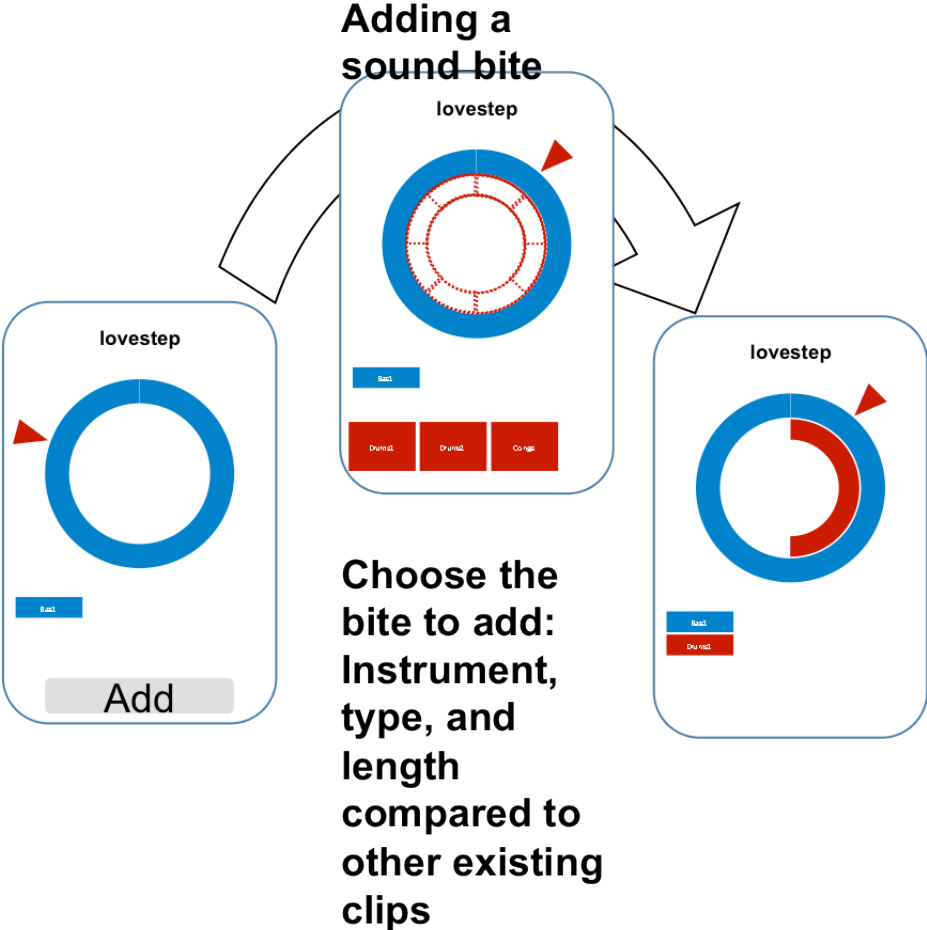
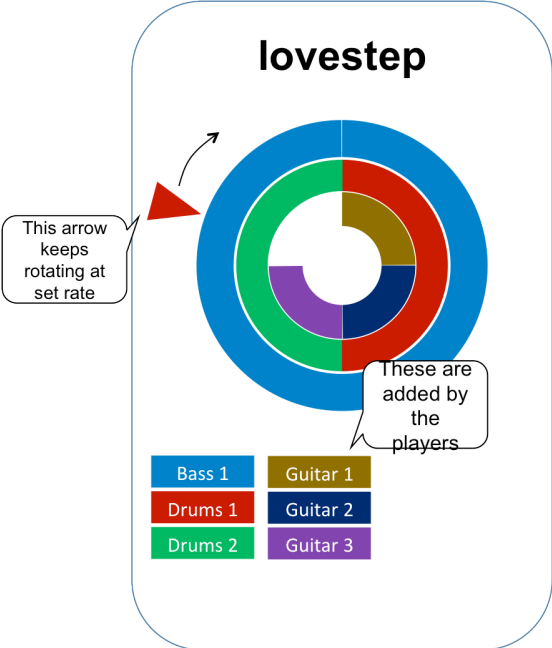
We chose to pursue that idea that was “simultaneous and simple”, and brand it with our moniker, “Lovestep.” It seemed to us that it has the broadest appeal in that musicians of all levels of musical proficiencies can sit down with it and collaborate to make music. The possibility that people of wildly different levels of musical proficiency can work together is what mattered to us most.

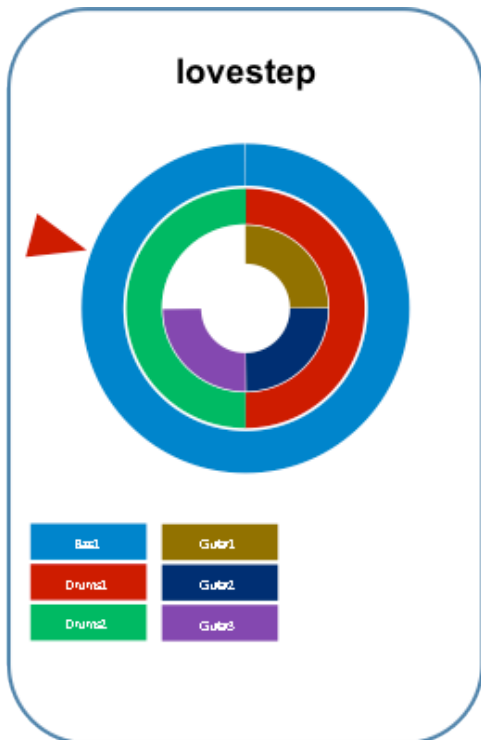
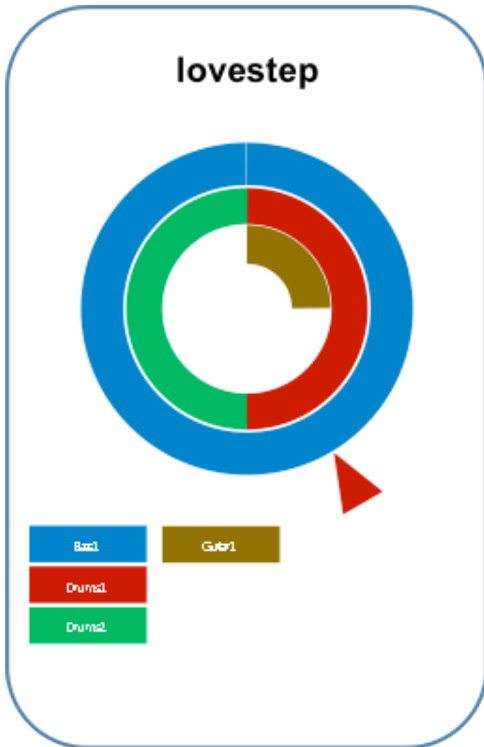


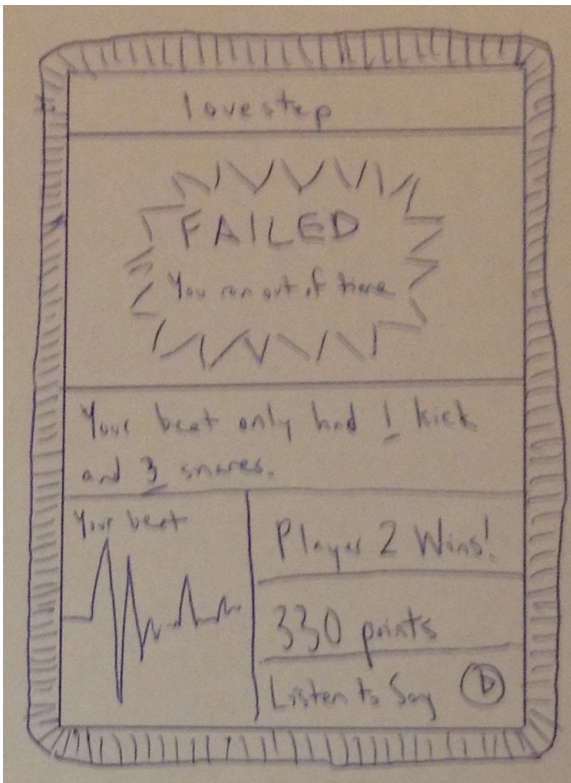
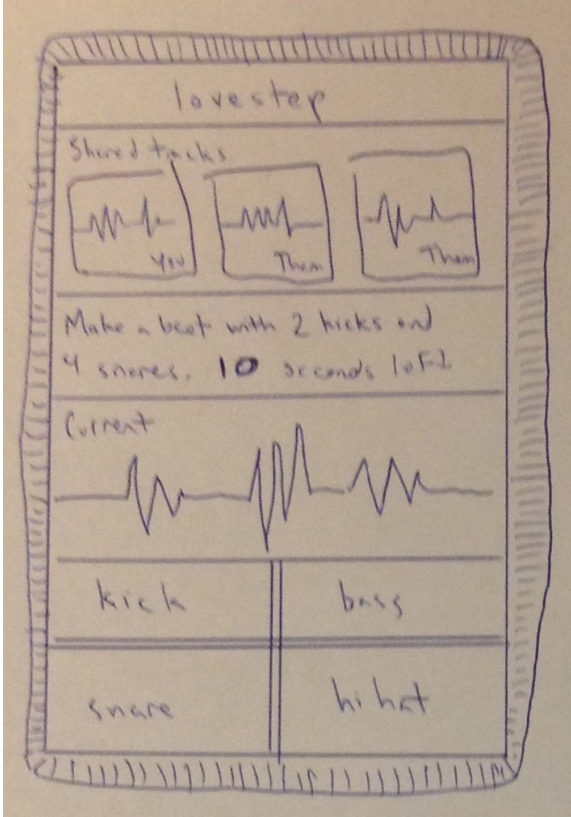












lovestep

Challengers

Search

Wins	Losses	Name	
6	3	Joey	⊙
5	1	Igor	⊙
2	4	Scott	⊙
1	7	George	⊙

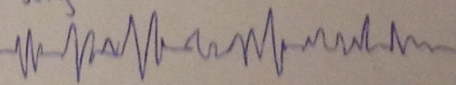
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You Win!

Player ran out of time

You have won 15 games!

Song



PLAY SONG | CONTINUE

⊙