assignment four:

Studio Redesign and Software Development

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Studio Redesign

The original studio layout felt very cramped. People weren't able to move about the space comfortably. We also experienced issues during class critique; visibility was poor and participation was low because desks were on the side of the room opposite to where projects were being presented.

Initial Flow Sketches

Considering Individual and Collaborative Spaces

Smaller desk clusters allow for increased mobility because they are smaller obstacles to maneuver around.

In the initial planning of the space, we came up with a couple of flow patterns and seeing where the majority of people in studio would be situated throughout the day. These sketches eventually took us into SketchUp where we tried to see all of these ideas come together.
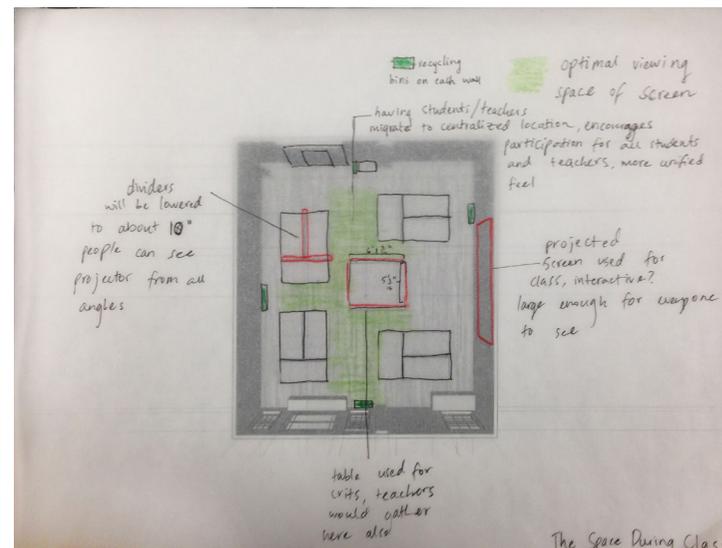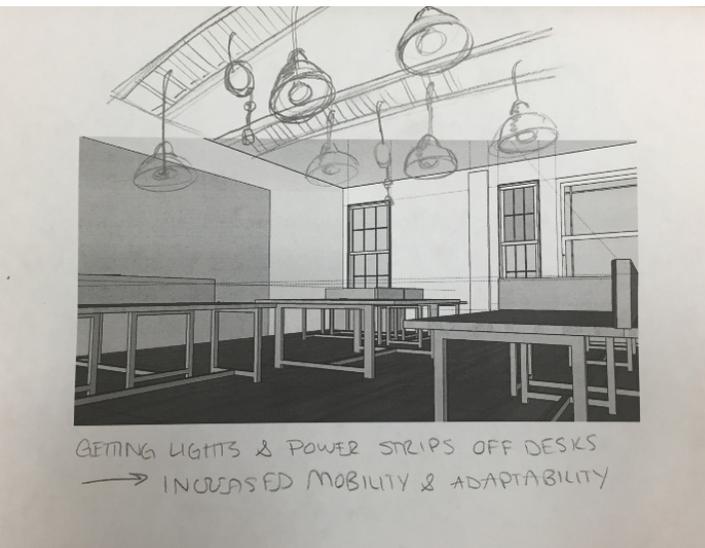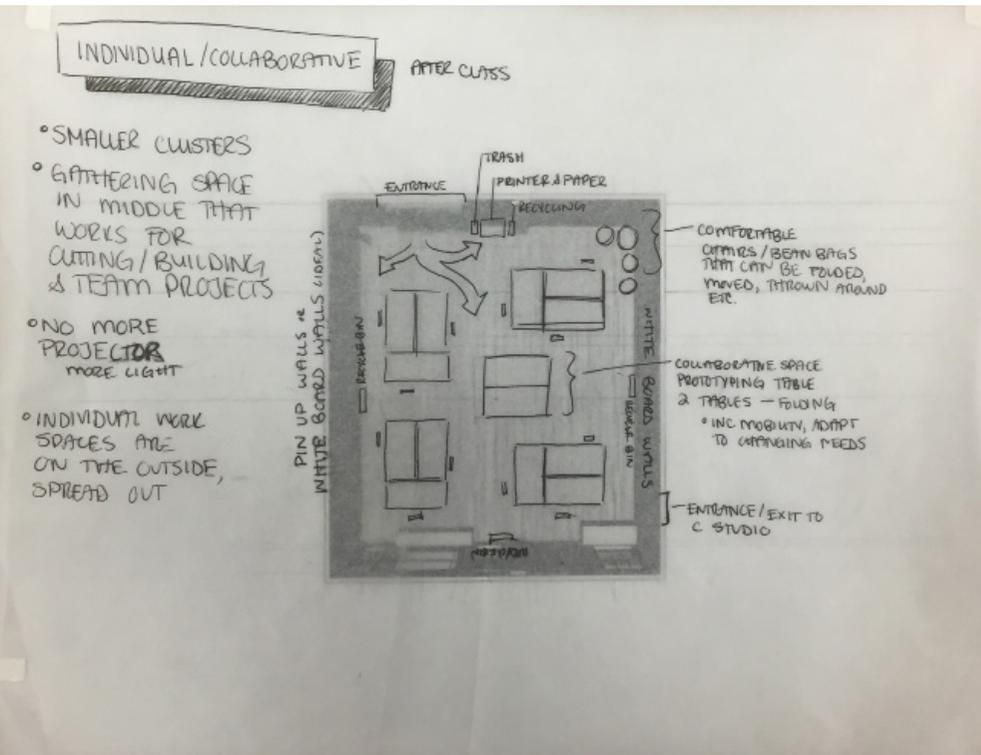
Working in SketchUp

SketchUp made ideation and prototyping tedious and time consuming. We were often frustrated working with the application. We weren't able to make many models because of how time consuming the process was.

Working with Depthmap

Depthmap is a program that creates different visual analyses of spatial layouts. We wanted to utilize the program to track patterns and layouts that we were creating, however, we were unable to create actual visualizations since we did not have access to SketchUp Pro which has more resources and tools, including the ability to export 2D CAD files.

For our final projections, we created mock ups of similar maps that simulated what could potentially happen if a software like Depth Map was applied to our physical prototypes. In the end, I think that our mock-ups were actually more informative and easy to understand
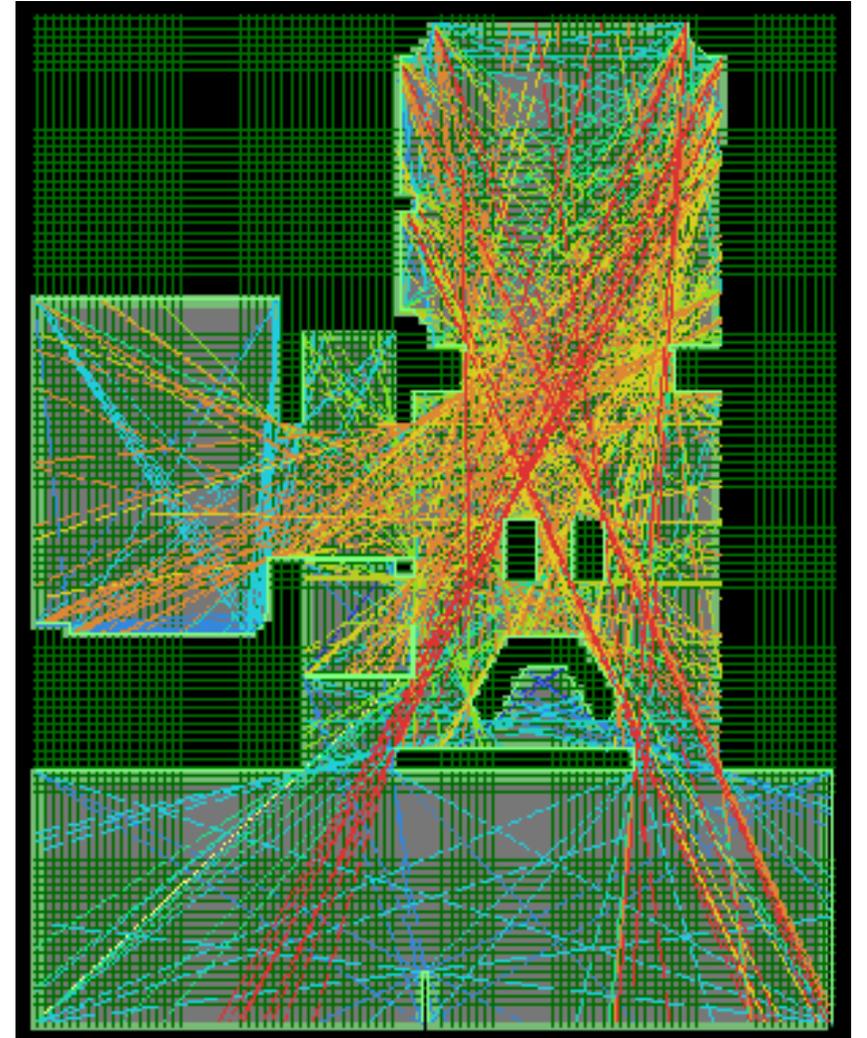
Research of SmartSpaces

When we started out thinking of things to try out for our final project, we were interested in both reconfiguring the studio space and trying to find ways of tracking consumption and energy use within the studio space.

After having a meeting with Mr. Aziz from the Architecture department, we got very interested in the concept of sustainability and how we can incorporate good practices of energy use into our design. After the first crit, we realized that the two concepts we were working with were very different, so we decided to go with the idea that was most relevant and applicable to our space; designing a layout that improves mobility and use of the design studio. This decision eventually led us to the velcro wall when we got into making physical models.
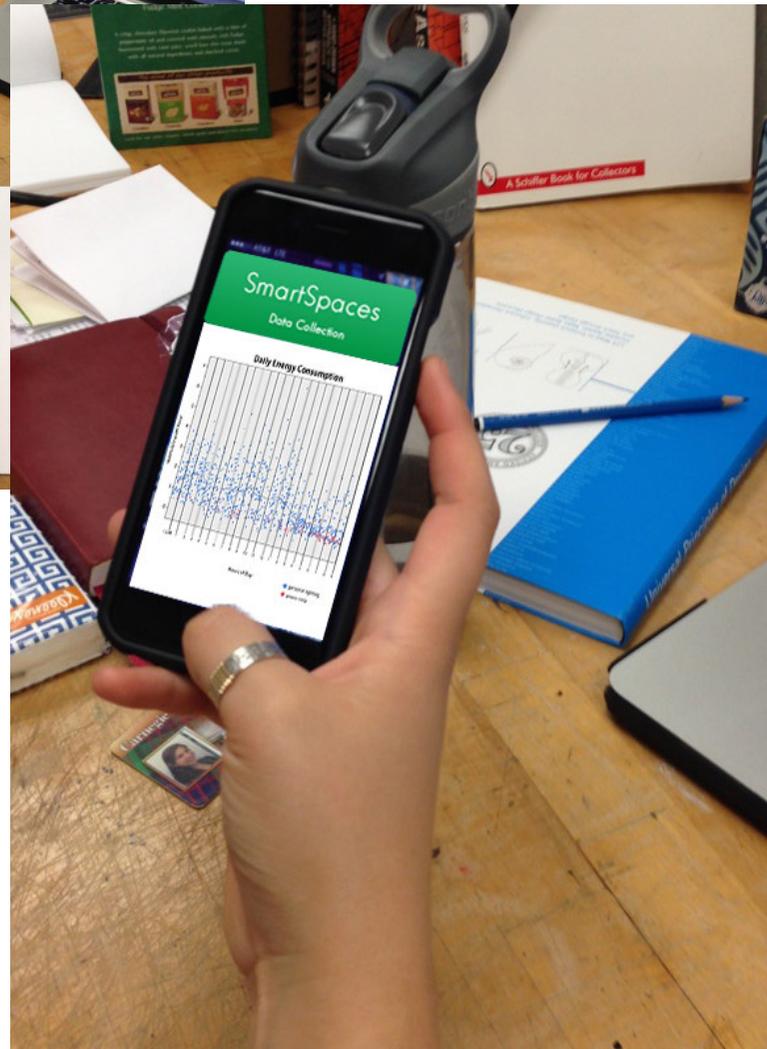
Second studio redesign
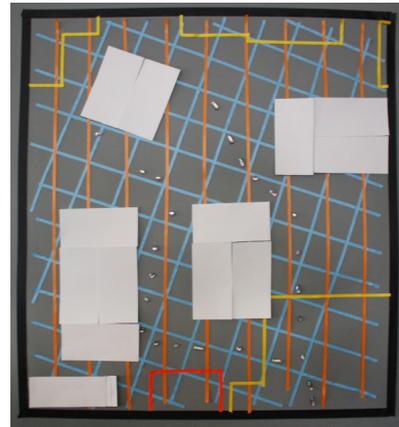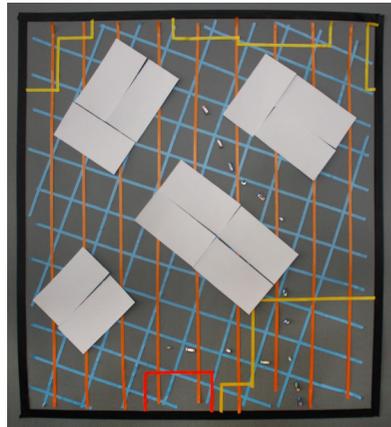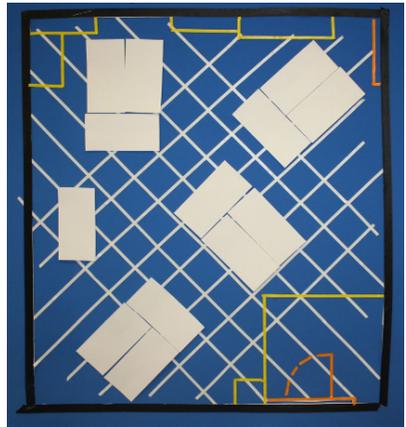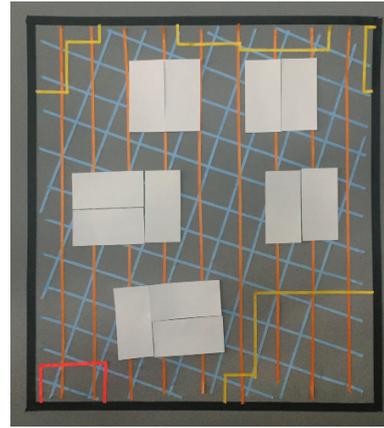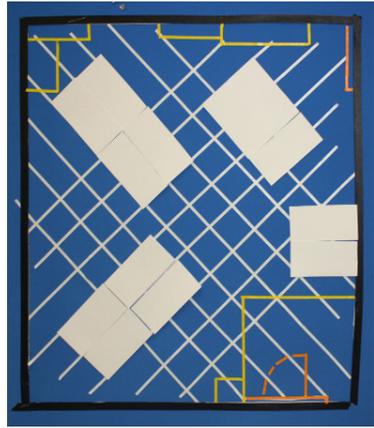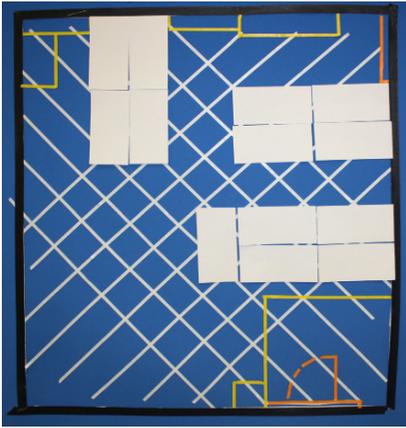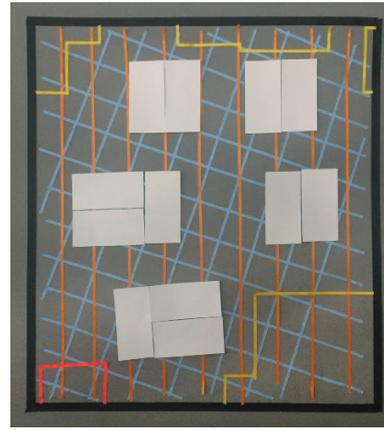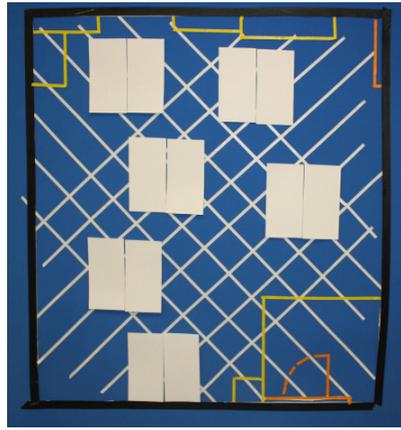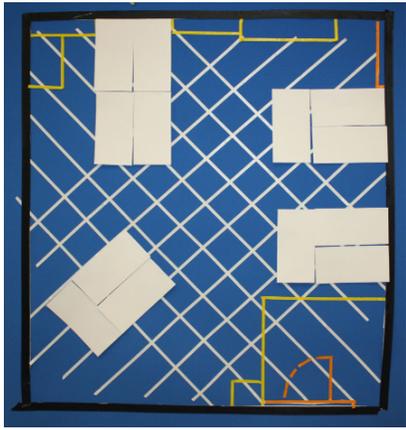
Working with Velcro

We wanted to experiment with the velcro wall so we decided to move out of SketchUp and start using our hands with physical models. Lia advised us to use different kinds of grid systems to find new ways to orient the furniture.

Initially we made the grid on a 45 degree angle and then decided to move to a less rigid format with a more acute angle (approx 30 degrees). Working with the paper desks was much easier than using SketchUp and allowed us to iterate quickly, taking photos of each iteration along the way.

We used the jewels to try and find paths through the space to see if it was easy or difficult to get to each desk in the space.

We tried some formats keeping all individual space, but we liked the layouts with collaborative or desk sharing the best. Thus we could have flexible use spaces and students who do not use the studio space after class would only have an in class space. Taking down the dividers became an integral part of this concept; however we ran into a lot of problems taking them down.
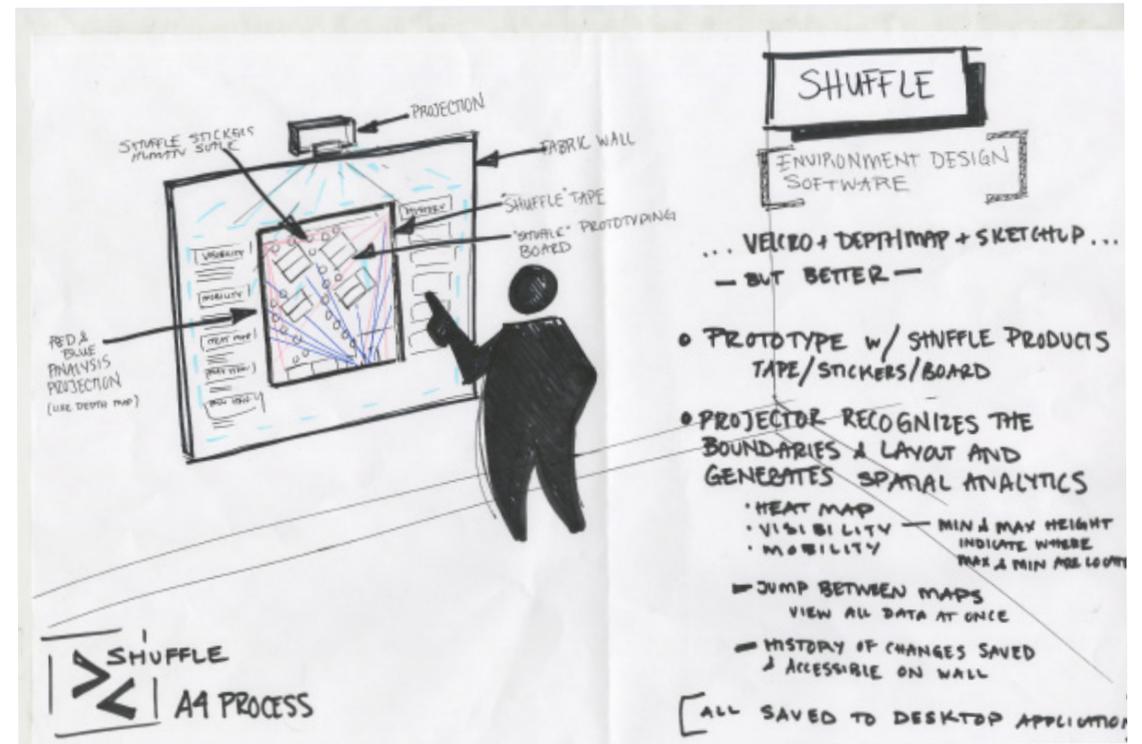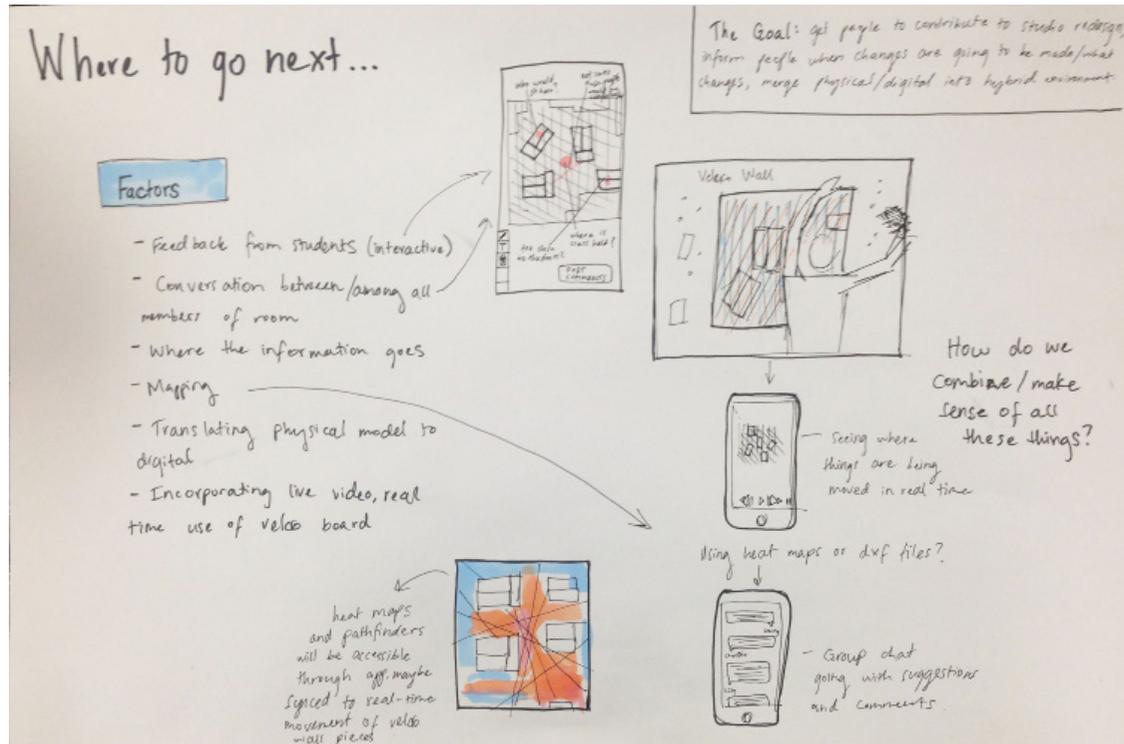
Final Layout

We jumped from sustainability to mapping software. We felt like we were totally changing our focus, since the two parts of the project felt disconnected. Instead we built off of the studio redesign and thought about what we learned from the experience. We wondered how the experience of changing the space could be better, and how it could cause less disruption to the users.

shuffle

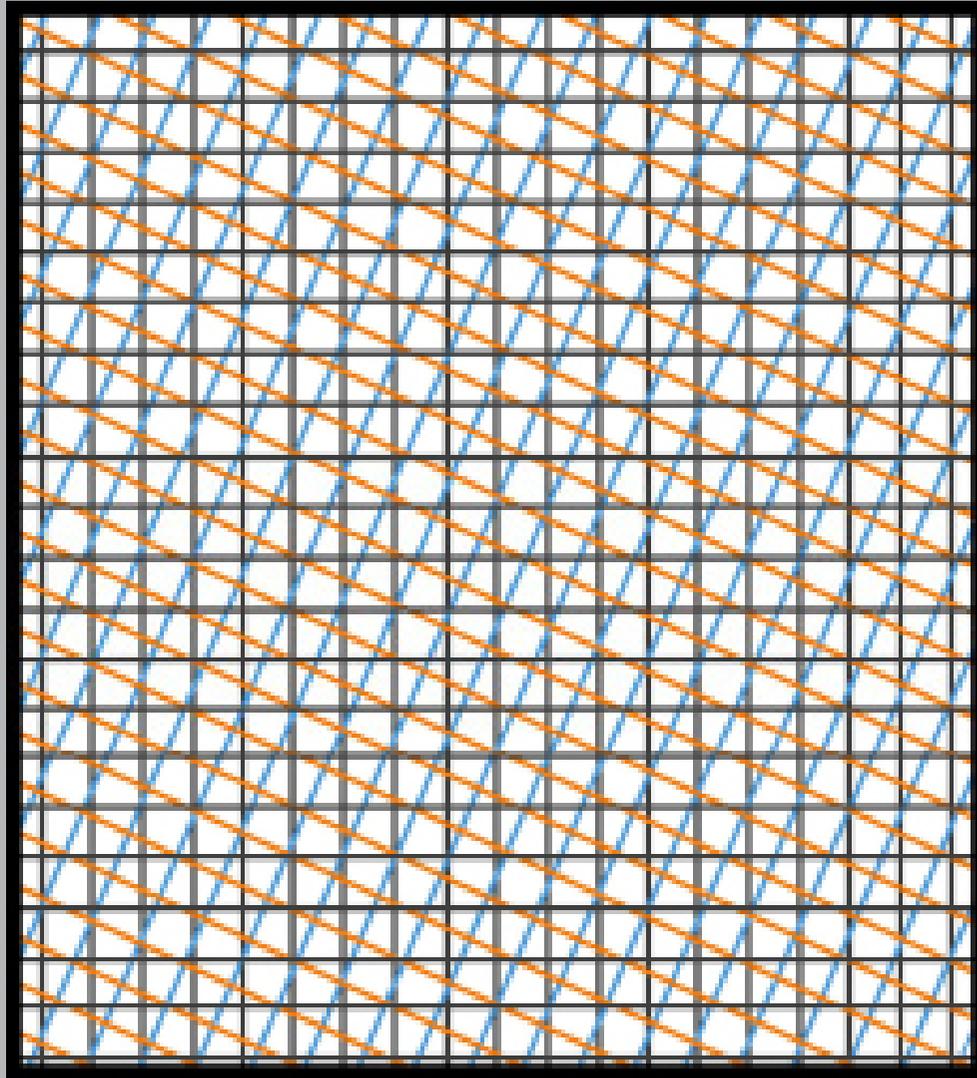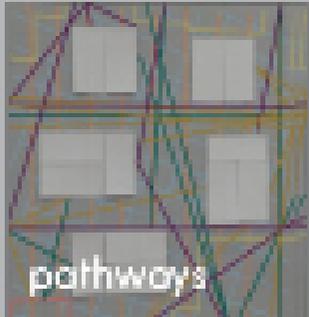hybrid prototyping software made
for environment designers

vimeo link: https://vimeo.com/142939675

Inital Ideation Sketches

Projections
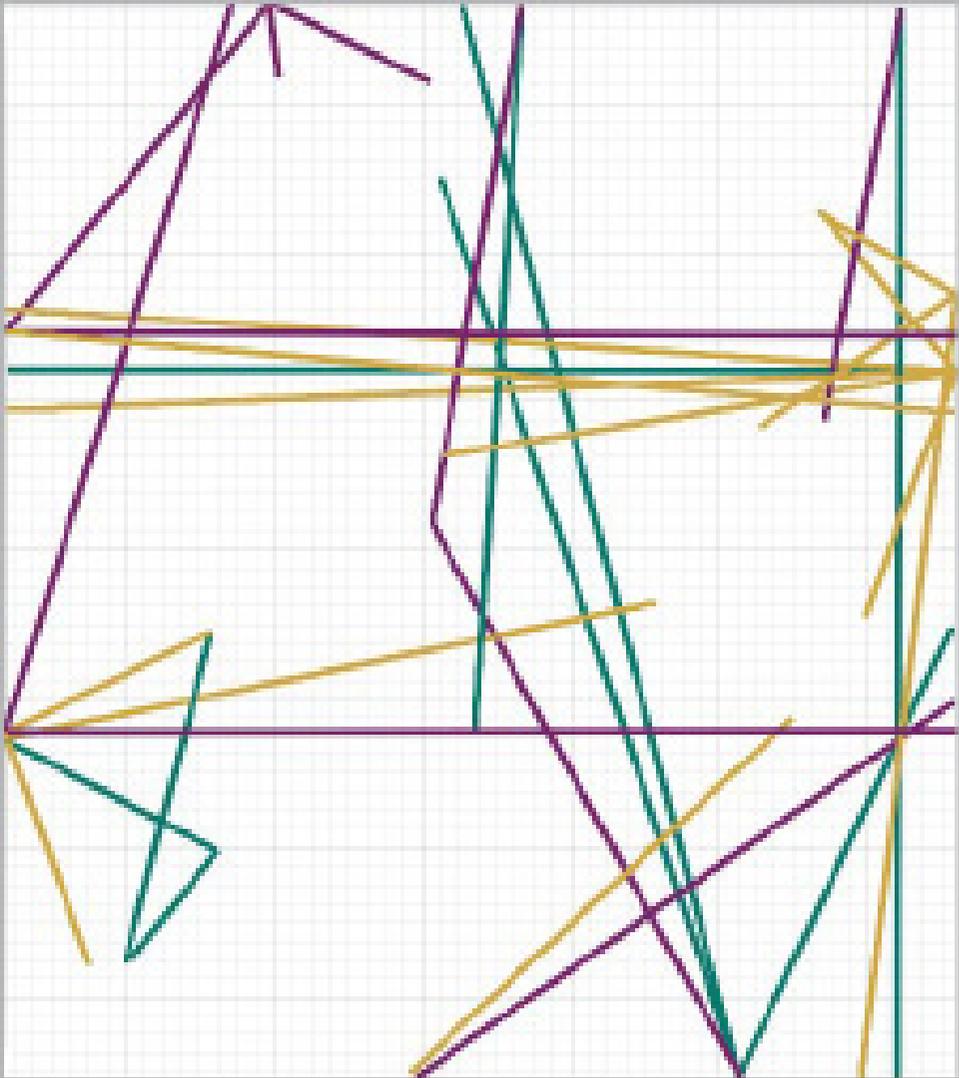
Projections

Projections
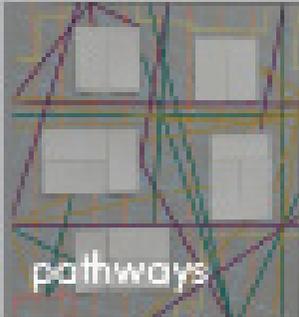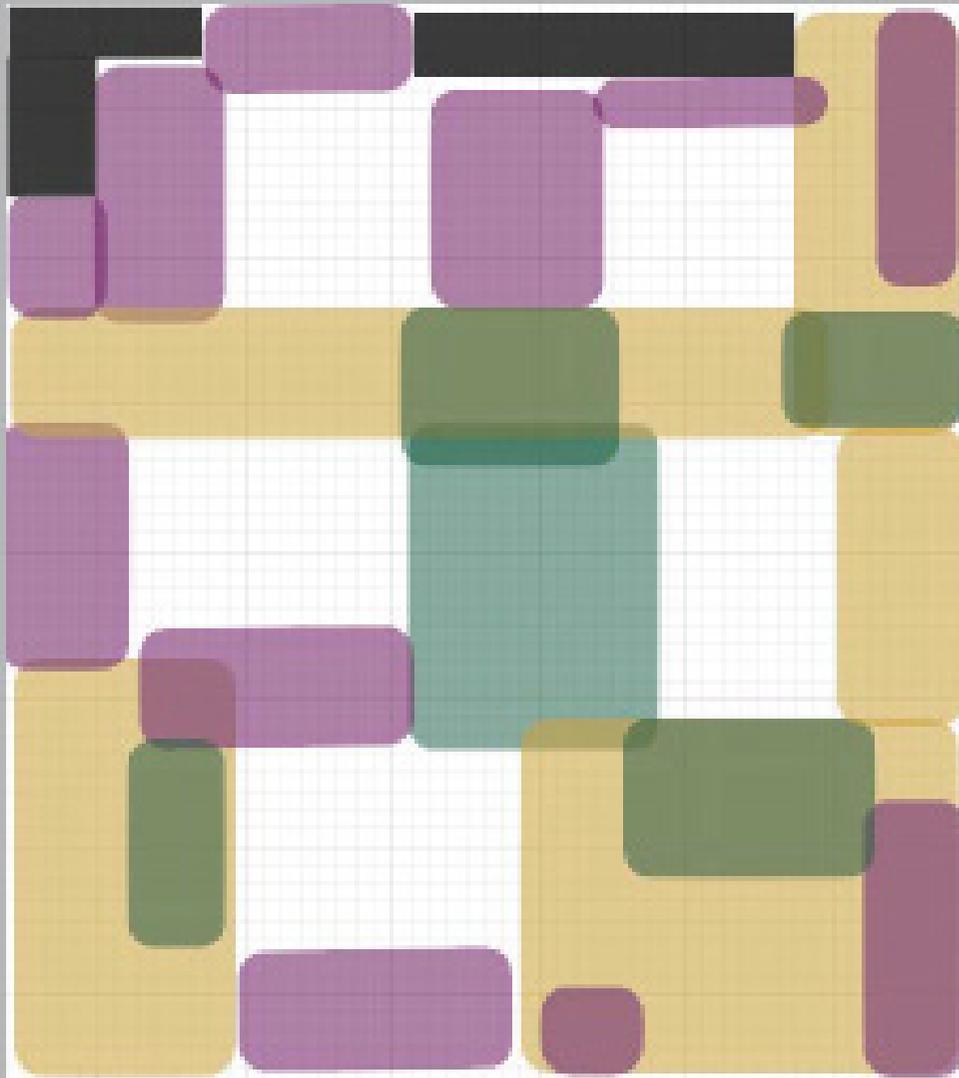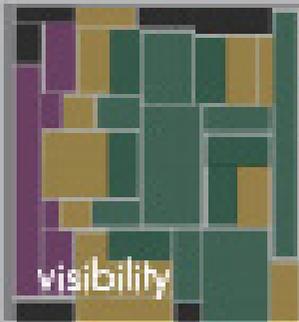
The Mobile App Interface
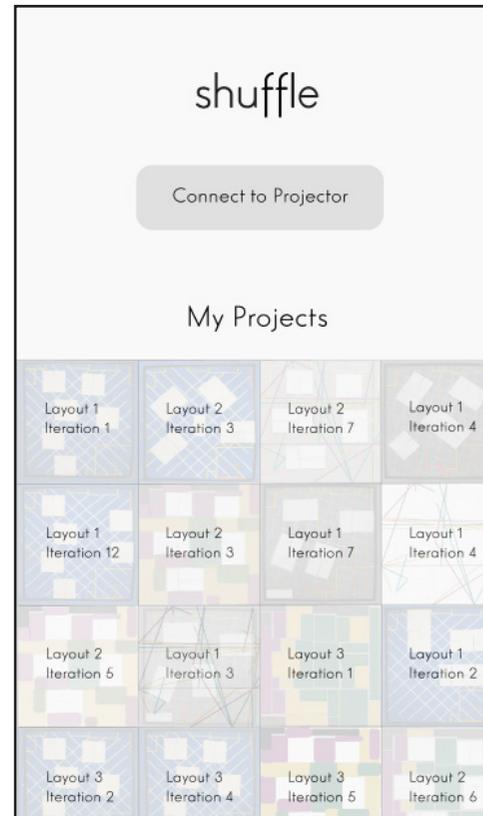
It took us many iterations to get to this version of the app. Since we decided to use Invision to model the mobile and laptop application, there were many changes that needed to be made including the removal of the top bar of the mobile interface, what buttons or indicators we provide for the user to move through the app, and many other features.

Since we decided to include both a mobile and laptop version of the app, we felt that it wasn't necessary to make both "Connect to Projector" buttons functional. It was really amazing to see our illustrator files come to life and become something that gives the impression of being a real system.

shuffle

Tap to Continue

shuffle

User gjohnson

Pass ••••••••

Go

Q W E R T Y U I O P

A S D F G H J K L

Z X C V B N M

123 space . Go

shuffle

Connect to Projector

My Projects

Layout 1 Iteration 1	Layout 2 Iteration 3	Layout 2 Iteration 7	Layout 1 Iteration 4
Layout 1 Iteration 12	Layout 2 Iteration 3	Layout 1 Iteration 7	Layout 1 Iteration 4
Layout 2 Iteration 6	Layout 1 Iteration 3	Layout 3 Iteration 1	Layout 1 Iteration 2
Layout 3 Iteration 2	Layout 3 Iteration 4	Layout 3 Iteration 5	Layout 2 Iteration 6

Panel 1 (Login screen):

New to shuffle? Sign up

shuffle

Username

Password

Forgot password?

Panel 2 (Top right):

shuffle

Shared   Projects   Add Project   Messages   Contact   Log out

Connecting

My Layouts

| Layout 1 Iteration 1 | Layout 2 Iteration 3 | Layout 2 Iteration 7 | Layout 1 Iteration 4 | Layout 1 Iteration 12 | Layout 2 Iteration 3 |

| Layout 2 Iteration 5 | Layout 1 Iteration 3 | Layout 1 Iteration 7 | Layout 1 Iteration 4 | Layout 3 Iteration 1 | Layout 1 Iteration 2 |

Panel 3 (Bottom left):

shuffle

Shared   Projects   Add Project   Messages   Contact   Log out

Connect to Projector

My Layouts

| Layout 1 Iteration 1 | Layout 2 Iteration 3 | Layout 2 Iteration 7 | Layout 1 Iteration 4 | Layout 1 Iteration 12 | Layout 2 Iteration 3 |

| Layout 2 Iteration 5 | Layout 1 Iteration 3 | Layout 1 Iteration 7 | Layout 1 Iteration 4 | Layout 3 Iteration 1 | Layout 1 Iteration 2 |

Panel 4 (Bottom right):

shuffle

Shared   Projects   Add Project   Messages   Contact   Log out

Connected

My Layouts

| Layout 1 Iteration 1 | Layout 2 Iteration 3 | Layout 2 Iteration 7 | Layout 1 Iteration 4 | Layout 1 Iteration 12 | Layout 2 Iteration 3 |

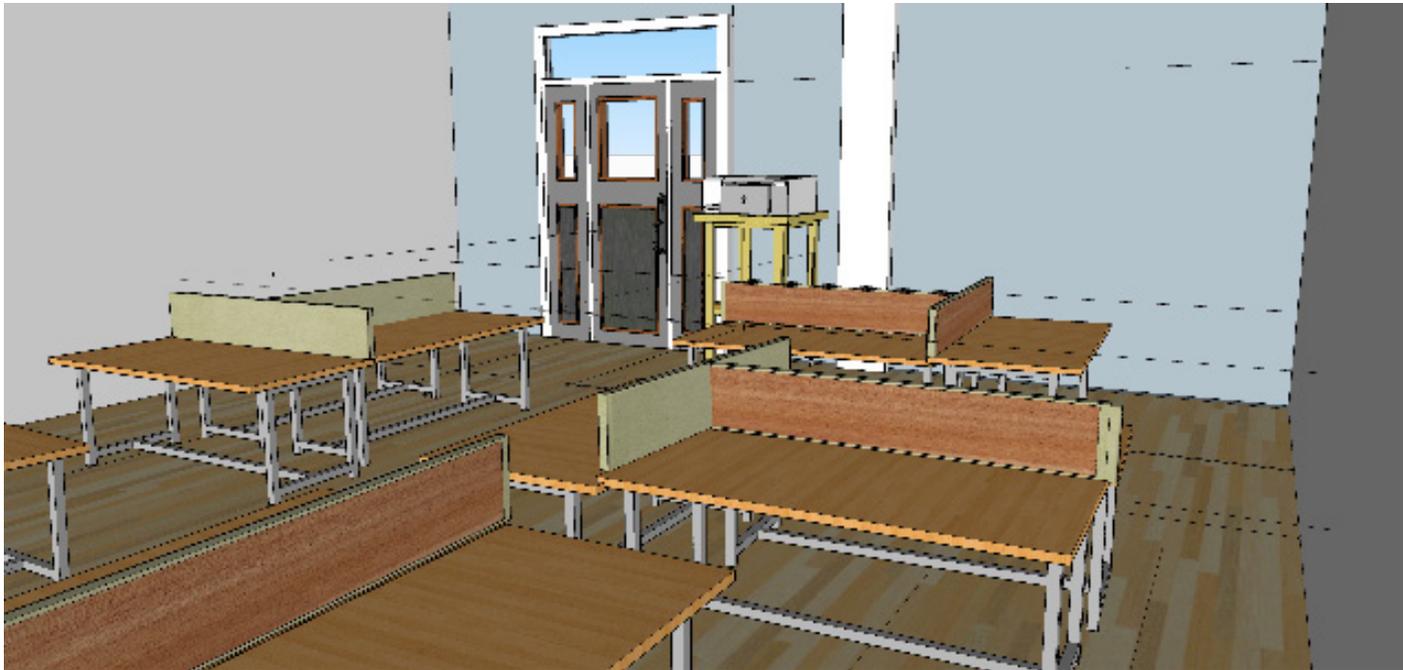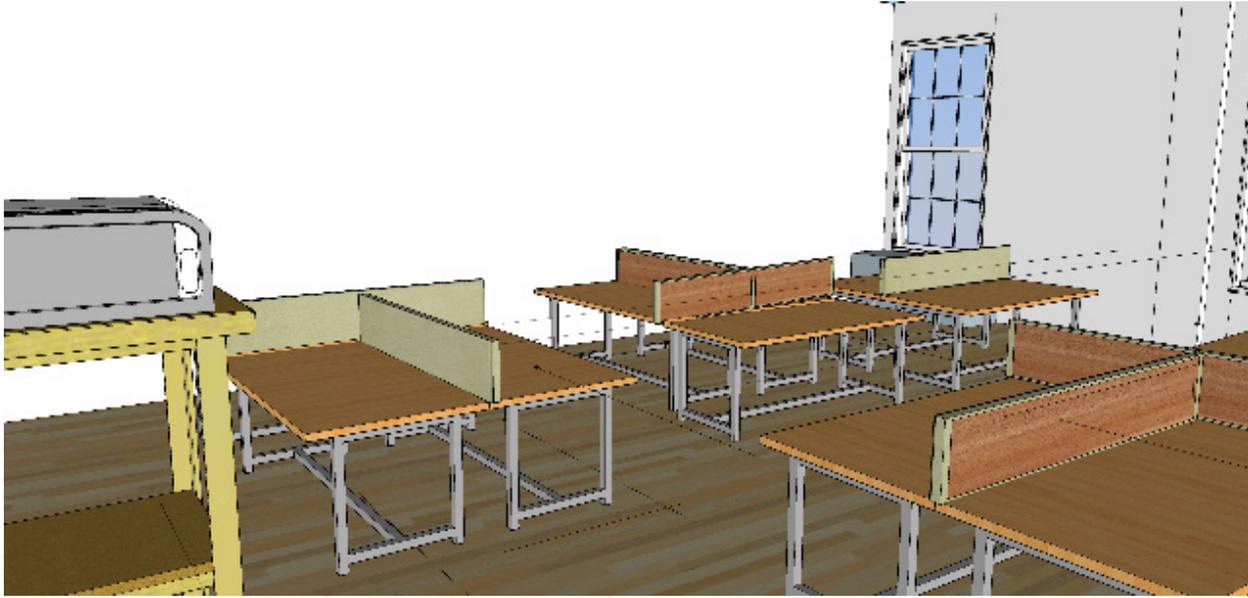| Layout 2 Iteration 5 | Layout 1 Iteration 3 | Layout 1 Iteration 7 | Layout 1 Iteration 4 | Layout 3 Iteration 1 | Layout 1 Iteration 2 |

SketchUp:
Rendering of Studio

It was pretty difficult to work quickly and productively in SketchUp, however we thought it would be a good idea to try and incorporate the 3D aspect of SketchUp into our final project. We decided to place a projection of SketchUp modeling onto our prototype. This way, the user will be able to tap or touch different locations in their physical mapping of a space (such as a corner or by a certain desk) and in touching it, the SketchUp map will take you to the view from this perspective.

Including this feature gives the users a more realistic experience of what it's like to be in a space without actually having to rearrange the physical desks all the time. This feature can be useful for lots of different explorations in environments and not just for studio redesign, which is why we thought the incorporation of this feature would be very useful.

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