Project 8 Prototype- CS 352 Group 4

Alison Jones | Victoria Dmyterko | Jonathan Chen | Zhuohong Gu
Oregon State University, Corvallis, OR

ABSTRACT -- This paper gives a brief summary of our current prototype design for our 2D Floor Planner project which we have named "RoomSketch". It discusses the changes we have made since the last iteration and why those changes were incorporated. The justifications are based on good user interface principles, research, and evaluations. There is also a flowchart of the prototype and how we expect it to work.

I. INTRODUCTION AND SUMMARY

Our project was to design a web-based interface for a 2D floor planner. In our initial prototyping we decided to name our project "RoomSketch". The purpose of this website is to provide a quick and easy way to create a basic floor plan of the user's home or future living space. This layout can then be used by the user to plan their furniture arrangements, add new furniture to the home, or discuss the use of shared spaces with roommates or family members. We believe that providing a simple and intuitive 2D Planner we can help save people time and money when they are moving or when they plan to add a new piece of furniture to their home. In this paper we will review the design changes made to our prototype. We will discuss why those decisions were made based on good user interface design principles, research, and evaluations. We will then present a flowchart of how our prototype works. Finally, we will provide a link to the interactive prototype.

II. DESIGN DISCUSSION

Following our evaluations last week there were several areas of improvement for our prototype. An issue we noted was that our layouts did not have a delete or erase option, this was a simple design fix. We added trash can icons next to the objects in the "user objects" area. In our prototype these icons will be clickable and will allow the user to delete furniture or the entire layout if they so choose. In order to avoid user error, we made sure to add a pop-up warning window which prevents the user from accidentally deleting all of their work. This meets the 5th and 9th heuristic principles, "error prevention" and "help users recognize, diagnose, and recover from errors".

Another issue brought up during our heuristic evaluation was the lack of labeling on the menu icon. This was also an easy fix, we simply added the "Menu" text which is still discreet but now clearly tells the user what the icon is for. The menu is important to the design because this is where the user can save, export, share, or find help for the layout. By adding the label we help the user find these functionalities and fulfill the 6th heuristic principle, having icons that are clearly labeled.

A minor wording issue that a team member brought up was the "User Objects" banner. This is vocabulary that would be more familiar to people who use prototyping tools or computers more often. However, to the average person it might sound too technical and boring. Instead we implemented "My Layout" which sounds friendly and still conveys the same idea, which is that the objects in the box belong to the

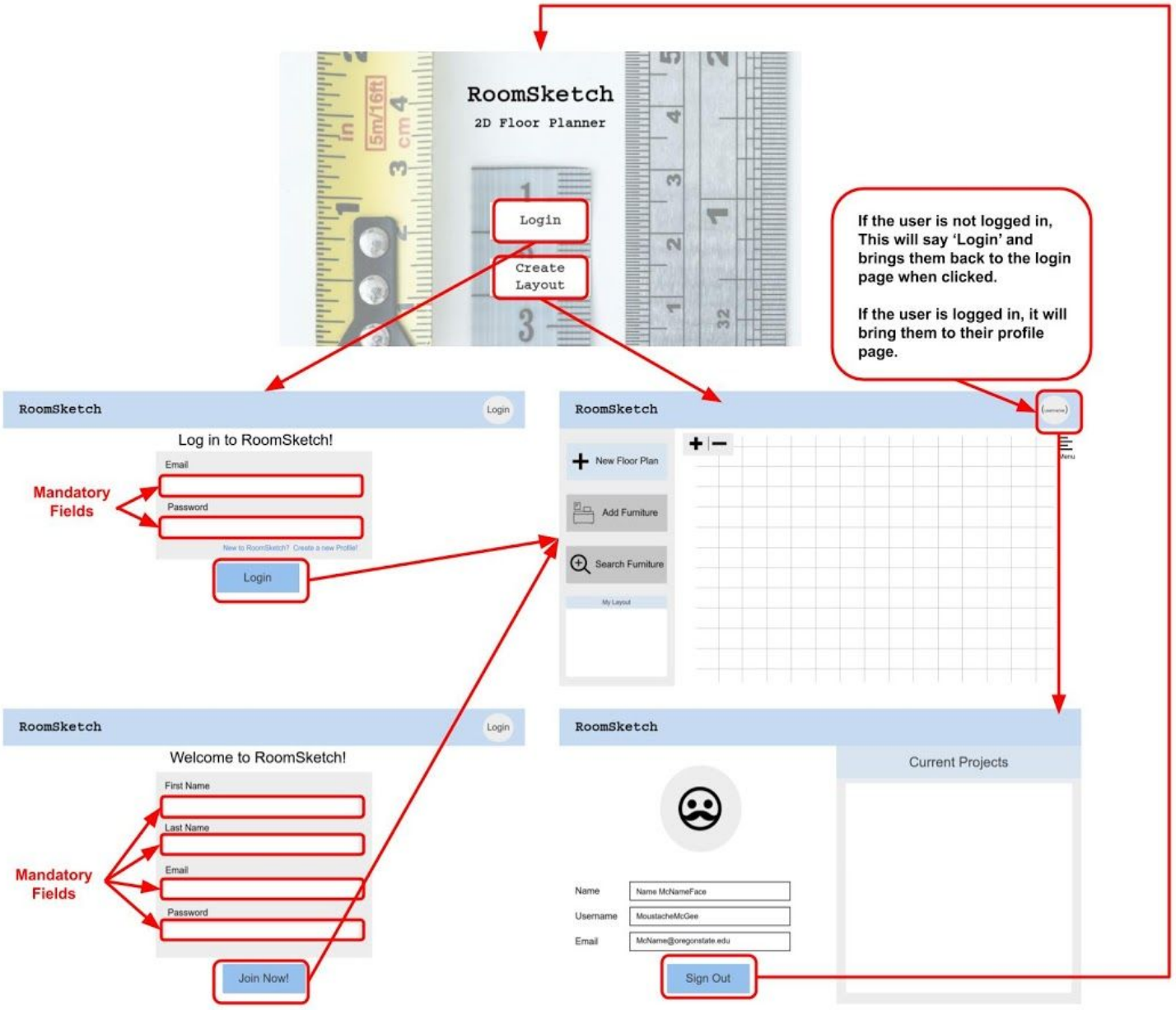
user's layout. The rest of the main menu on the left of the screen was not changed, as it has bold symbols and enough spacing to catch the users' attention when using the website. We kept the main menu items (New Floor Plan, Add Furniture, and Search Furniture) consistent so that they're always shown at the left border of the screen. The objects in the layout continue to have the delete symbols next to each object so that users will be able to edit their layout objects freely.

In regards to the layout section of the interface, the grid format helps users keep track of the scale of the floor plan and objects being moved and placed around the layout. This keeps the rest of the screen clean by keeping the buttons on the layout so that the user knows what effects the layout and objects directly.

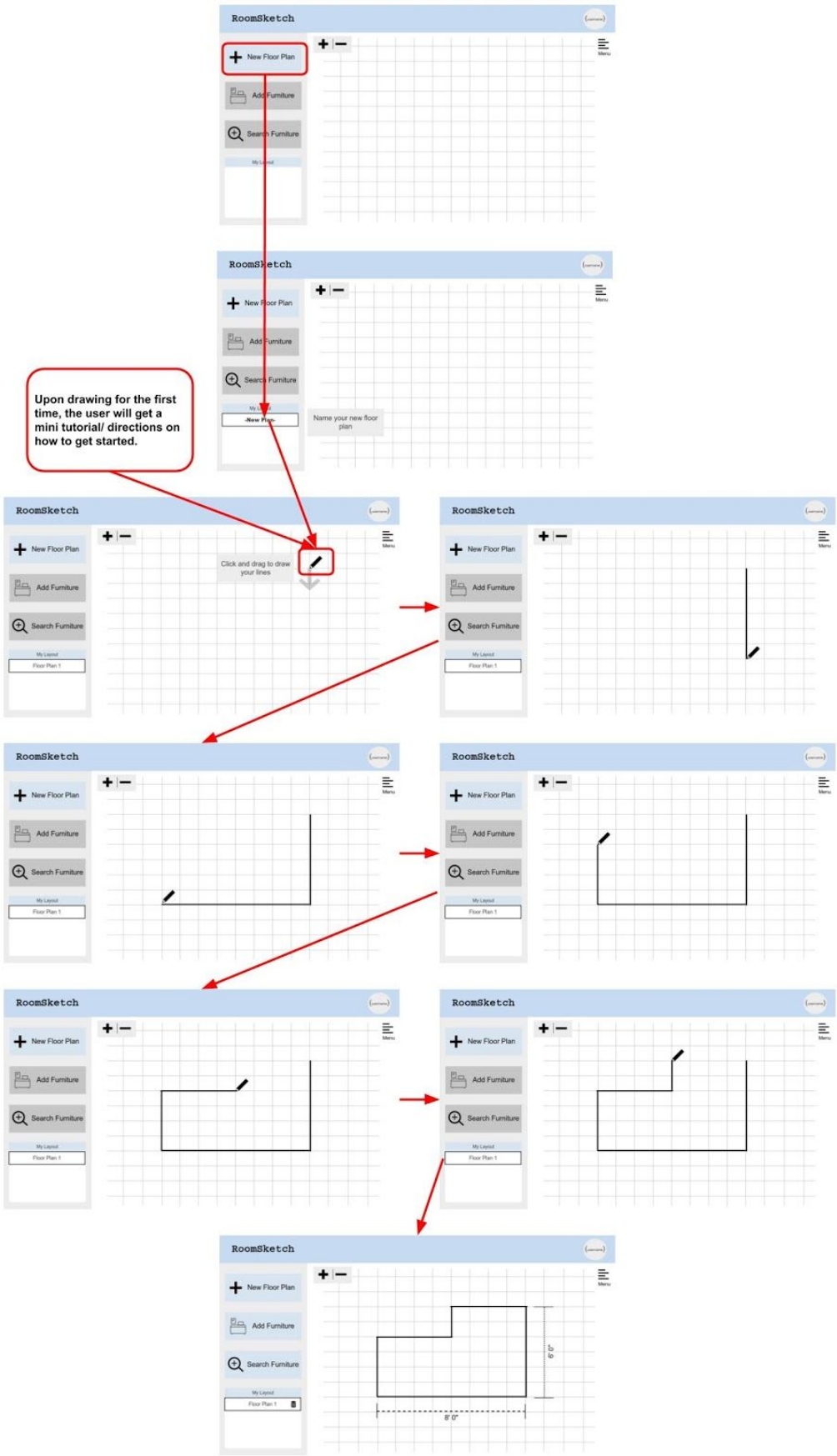
There was also concern raised in terms of a better design for the sharing settings. The previous design reflected our ideas of floor plan sharing as we included the invitation search bar, and the contributor's clearance list. However, at both the analytical evaluation and empirical evaluation part, we noticed that casual and less-experienced users might not be able to grasp the idea easily, while some of us has been using Google Doc or GitHub to collaborate since first year of the college. To address this problem, we added a section for changing the privacy level in the sharing settings. In public mode, everyone can view the document but still need to be invited to edit the floor plan. In shared mode, only invited users can view or edit the floor plan. In private mode, only the creator can view or edit the floor plan. We added text below these options to explain all these settings so it's more user-friendly.

III. STORYBOARD

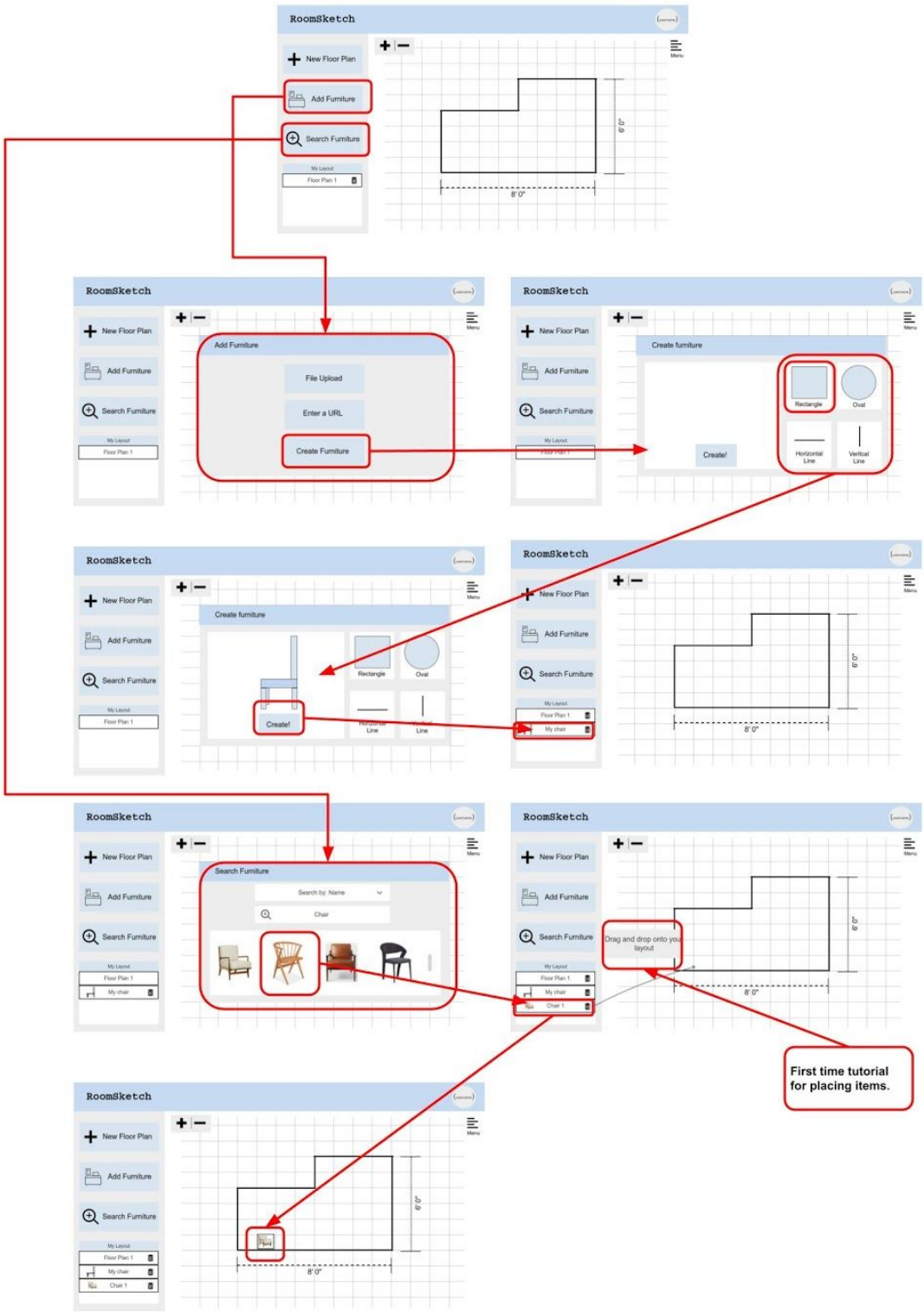
Login and/or Profile Creation



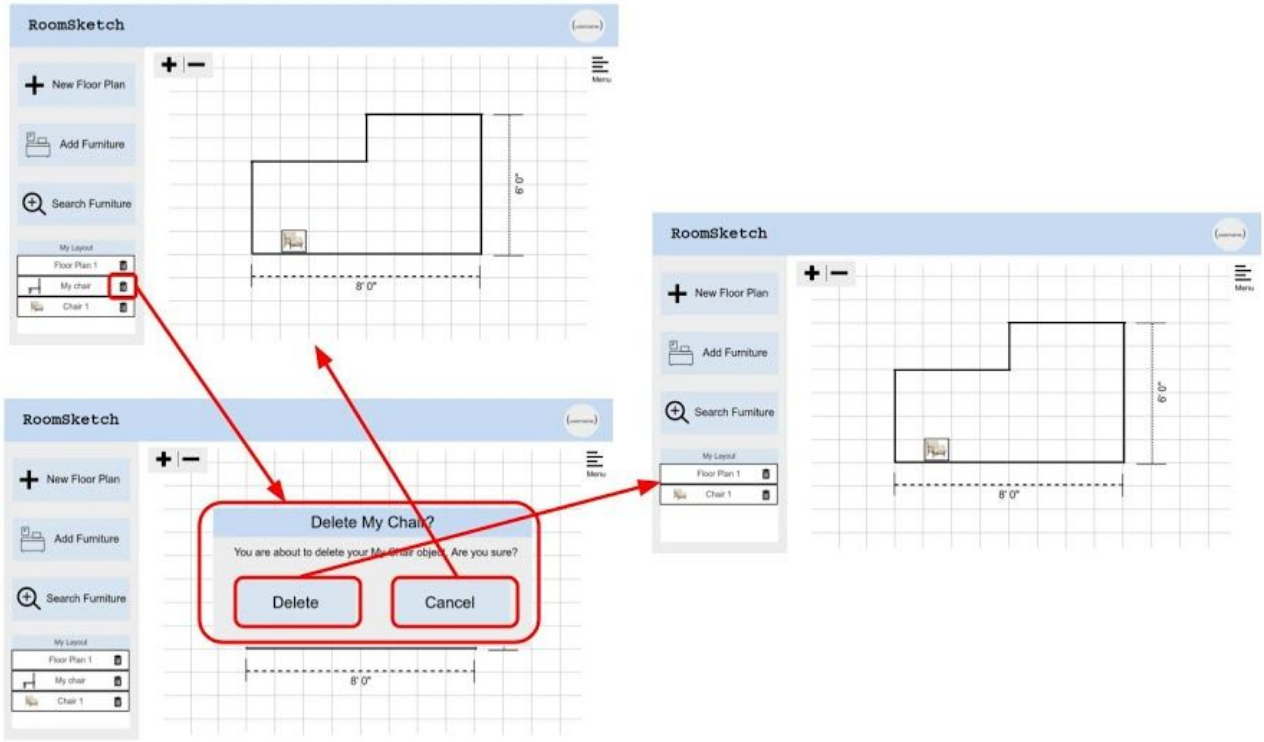
Learning to draw/ Interactive Drawing



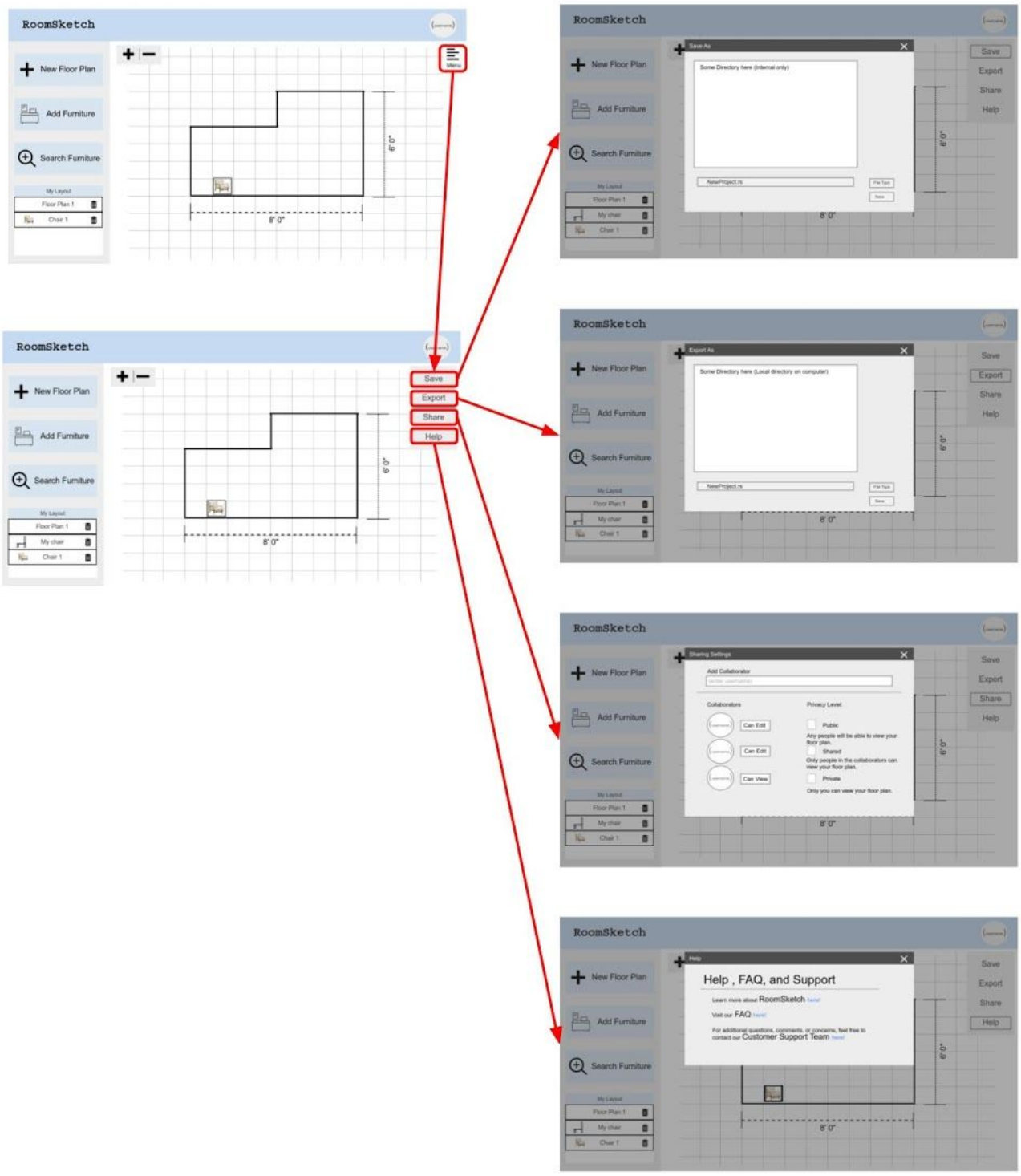
Creating/ Searching/ Placing Furniture



Deleting Furniture



Menu Options



All full size storyboard images can be found here.

IV. PROTOTYPE

Our prototype is created through Proto.io. The interactive version of our prototype can be accessed via this link: https://pr.to/G24SJJ/

CONTRIBUTIONS

Alison Jones, Visual Design:

- Storyboards
- Some Prototype Updates
- Completeness: 5

Victoria Dmyterko, Leadership:

- Abstract
- Introduction
- Part of Design Discussion
- Some prototype updates
- Part of storyboard
- Completeness: 5

Jonathan Chen, Writing:

- Part of Design Discussion
- Completeness: 5

Zhuohong Gu, User Communication:

- Some prototype updates
- Part of Design Discussion
- Completeness: 5