

Room Reserve

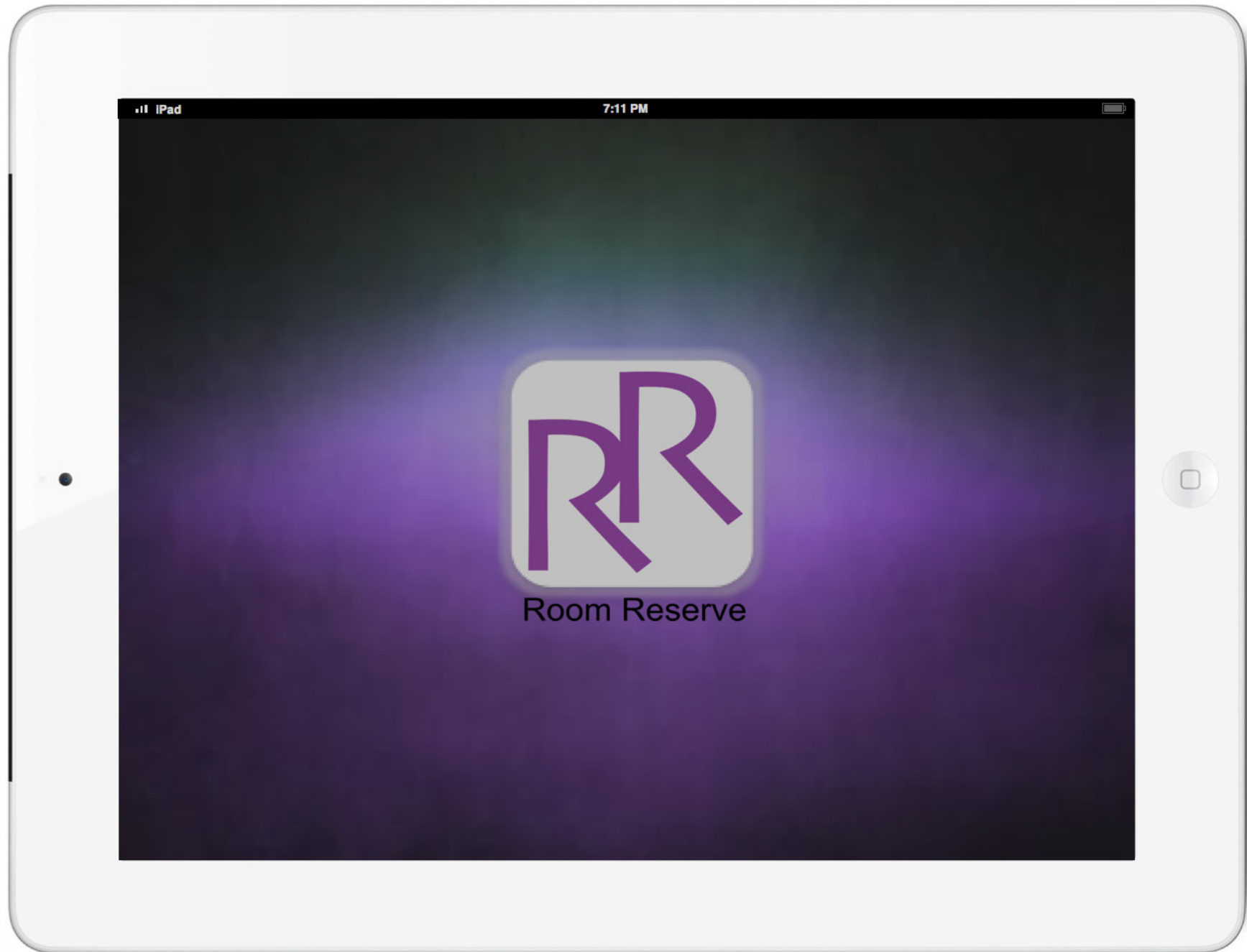


TABLE OF CONTENTS

- 3 INTRODUCTION
- 4 CUSTOMERS
- 5 FEATURES
- 9 WIREFRAMES
- 12 USABILITY
- 14 CUSTOMIZATION
- 15 FUTURE DESIGN



The design team of Ian Hall, Maya Lewis and Lark Mills developed Room Reserve, an iPad application that functions as an on-the-go, self-serve, room booking management tool. While other room booking management products rely on desktop software (such as Microsoft Exchange), Room Reserve allows users to book room reservations from an iPad no matter where the user is with just a few steps.

We researched four existing room booking management tools for mobile devices:

1. YARooms (web, android/iPhone and iPad app)
2. Rooms by Traptera (web, iPhone and iPad app)
3. MRM Mobile by Assure Software (iPhone and iPad app)
4. Get A Room by Jane Pyle (User Experience Designer) - For video about how the design of this iPhone app came about, go to Jane's Portfolio website: <http://www.gojanepyle.com/portfolio/get-a-room-iphone-app/>

We also reviewed room booking management products for the desktop, which provided examples of cumbersome designs.

1. Conference and Meeting Rooms Management Online (www.bookmeetingrooms.com)
2. Event Management Systems (www.dea.com)
3. DePaul University's Event Management System (<https://ems.is.depaul.edu>)

From the start, we knew we wanted to get away from the complicated web applications that currently exist for room booking management. The four applications we reviewed each had various levels of functionality, with YARooms having the most features and Rooms by Traptera having the least features. We identified the strengths and drawbacks of each of these four existing mobile app products. When developing the Room Reserve app for the iPad, we focused on incorporating only the best of these features into our one product. Our main goal in developing Room Reserve was to make available conference rooms easily identifiable on one screen so users can book reservations immediately without the stress of filling out lengthy forms or navigating through complex search filters. As a result, we developed the Room Reserve app for the iPad that makes the task of booking a room quick and easy.

Room Reserve is an essential tool in today's business climate of telecommuting and global communications, where the need to book a conference room may arise no matter where a user is conducting business. Room Reserve eliminates having to remember to book a room upon returning to the business desktop. Not only is Room Reserve an easy-to-use, room management product, but we also customize the app to coordinate with the company's branding and color scheme.





Any Size Company

Room Reserve is the perfect tool for any business, big or small. If the business is on only one or two floors, Room Reserve can help organize the company meeting spaces so that no room conflicts occur between employees. If the company is large with multiple buildings, campuses or even multiple branches in various cities across the world, Room Reserve can also accommodate the needs with a customized app that meets all the business specific needs related to room reservation management.

Office Managers

Room Reserve is also an ideal tool for office building managers. The office building managers can have administrative access, meaning they can see everyone that books a room, override a booking if needed, and see who to contact in regards to the booking. Room Reserve helps to remove the middleman, who is in charge of the booking of conference rooms. Room Reserve saves time for the office managers improves productivity and therefore saves the company money in the long run.

Mobile Employees

Any employee who telecommutes or travels often for work (such as sales force teams) will greatly benefit from the convenience of Room Reserve’s mobile room booking features. Since Room Reserve is built with the ability to sync with Microsoft Exchange and Google Calendar, our application for the iPad is ideal for businesses that have employees who travel off-site or telecommute.

Universities / Student Body

Room Reserve would be an excellent app for a University and student body. College students who belong to specific clubs or student organizations need to reserve meeting spaces. College students in sororities and fraternities need to book space for meetings, parties, dances and other special events. Students may want to book spaces to conduct study sessions. Students involved on athletic teams or intramural sports need to book spaces to host practice, scrimmages and games. The Room Reserve not only would help students stay organized and take one less distraction away from their studies, it would allow the students more independence and no longer need to ask for assistance from University staff, faculty or coaches in reserving rooms and facility spaces around campus. The Room Reserve app can be built to accommodate the room booking needs of University faculty and staff as well.

Salons/Spas

When a client calls to cancel a hair appointment or spa service, the chair or massage bed goes empty and the Salon loses money. However, with Room Reserve, clients can be given access to a room booking management tool for the Salon/Spa. For example, when a “room” becomes available due to a cancellation, the information is updated on the Room Reserve app. Use of the Salon’s social media accounts can help notify potential clients about cancellations and newly available “rooms”. The clients can then go to the Salon’s customized Room Reserve app and make a reservation to fill the empty “room”.

Room Reserve has a few solid features. While other applications require several steps to get to accomplish the main goal of booking a room, Room Reserve allows users to reserve a room in just a few steps.

One reason the Room Reserve app is easy to use is because it only has one main screen that features the most important function of the entire product (the room reserve function).

Login Screen

A login and password will be set up for all users with the assistance from the company's IT team. Users will only have to login once unless they logout from the settings menu after each use of the app. As shown in the screen capture, an option to stay logged in is turned on as a default feature.

Floor Plan Screen

Once users are logged in to the app, users will see this main floor plan screen launched upon tapping the Room Reserve app icon on the iPad. For the prototype, we are only showing one floor plan example. For customization, we would provide a dropdown menu of your company's floors so that users can switch between viewing different floors in the company building. If your company is bigger than just one building, we will add additional dropdown menus such as city, campus, and building.

Navigation Bar on Floor Plan Screen

The floor plan screen has a navigation bar near the top of the window that shows several menu options.
 Floor 1 / Floor 2 / More Floors / Help / Favorites / Settings

Floor Drop-Down Menus

For the prototype, we are showing an example of a company that has two main floors and a menu to for viewing additional floors in the company's building.

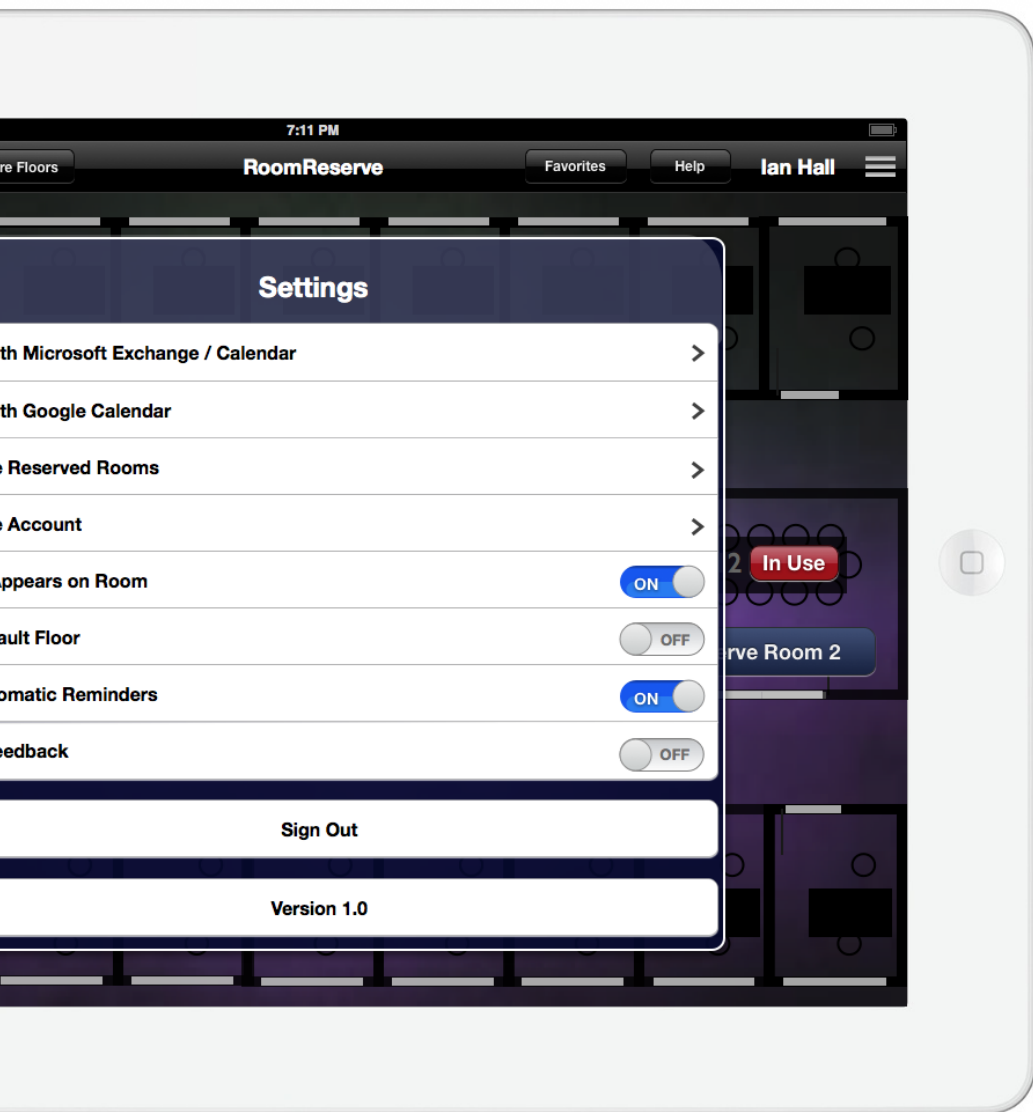
Help Drop-Down Menu

The help menu has two dropdown menu items: (1) a link to our blog and forum for our product Room Reserve that launches in Safari; (2) a link to our customer service email that launches in whatever email account you have added to you iPad. Our goal is to have designed the Prototype so well that users will not need to use the help menu. We encourage users to contact us with feedback on ways we can improve our next version of Room Reserve.

Favorites Drop-Down Menu

The favorites menu is where the users favorite rooms are saved. Users can add to and edit their favorite rooms directly in this drop-down menu.





Settings Menu

The settings menu is launched by tapping on the menu icon (a group of three horizontal bars). We chose this icon for settings because it is a conventional icon used by Apple products. The settings menu has several options for allowing the user to set up their preferences on the Room Reserve App. As shown in the screen capture, the settings menu includes the following preference options:

- Sync with Microsoft Exchange Calendar >**
- Sync with Google Calendar >**
- Manage Reserved Rooms >**
- Manage Account >**
- Name Appears on Room - on/off**
- Set Default Floor - on/off**
- Set Automatic Reminders - on/off**
- Send Feedback >**
- Sign Out (button)**
- Version Number (text)**

Settings Sub-Preference Option Menus Not Shown in Prototype:

- | | |
|--|---|
| <ul style="list-style-type: none"> Sync with Microsoft Exchange > <ul style="list-style-type: none"> Outlook calendar - on/off Outlook email - on/off Outlook contacts - on/off Push alerts - on/off Sync with Microsoft Exchange > <ul style="list-style-type: none"> Outlook calendar - on/off Outlook email - on/off Outlook contacts - on/off Push alerts - on/off Manage Reserved Rooms > <ul style="list-style-type: none"> Tech equipment requests > Room setup > Catering > Send Reservation > Cancel Reservation (button) Manage Account > <ul style="list-style-type: none"> Old password (text field) New password (text field) Confirm (button) (email sent w/ new pw info) Delete Account (button) | <ul style="list-style-type: none"> Name Appears on Room - on/off Set Default Floor - on/off Set Automatic Reminders - on/off Send Feedback >
(email launches in users account) Sign Out (button) Version 1.0 |
|--|---|

The on/off toggle buttons are conventional buttons already used on other Apple products. Users with experience using an iPad and using other Apple products should have an understanding of how to use this on/off toggle button by tapping and dragging their fingers side to side across the button.

The right-arrow shape is another conventional apple icon. By tapping this icon, the user will be taken to another screen or window with another set of options to choose from. While we are not showing the sub-setting screen options on the prototype they will include: The ability for the user to tap the right arrow of Microsoft Exchange and/or Google Calendar, where the user can turn on the calendar, contacts, and email of these accounts in the next sub-menu. Then any rooms that are reserved will be automatically saved into the user's calendar as well. Moreover, if the user has set up his calendar to produce pop-up reminders on all his appointments, then the user will also receive pop-up alert reminders on all of his reserved rooms as well.

Manage Reserved Rooms

If a user taps the right-arrow next to "manage reserved rooms," then he will see a new screen that allows the user to view all the rooms he has reserved that have not yet passed the reservation date and time. Users can cancel a reservation or indicate a room specific room set-up request (i.e. table shapes and table arrangements).

Manage Account

If a user taps the right-arrow next "manage account," then he/she will see text fields for resetting their password and also a button deleting the account.

Reset Password:

Old Password: _____

New Password: _____

Submit Button

Delete Button

The main screen of the settings menu has three on/off toggle options:

Name Appears on Room - on/off

Set Default Floor - on/off

Set Automatic Reminders - on/off

Users can choose to be private or public in sharing their room reservations by selecting it in this screen. Users can turn on or off the default floor as the main page of the app. Finally, users can turn on or off automatic email reminders that will be sent to the user when reserving a room.

Send Feedback

If a user taps the right-arrow next to "send feedback," then an email to Room Reserve's customer service address will be launched from the user's email account.

The version number of "version 1.0" will show as the current version of the Room Reserve app.





Two Main Functions of Floor Plan Screen

1. Reserve Room Now

Every room has a button that shows if the room is currently available. The developer built a program into the app so that this button would appear when a room is available at the time the user is on the application. The user can tap on this button, which launches a date & time picking pop-up box. The user can choose to reserve the room for 15 minutes, 30 minutes or 60 minutes.

If a room is not available now, the same button still appears in the room but it is in a different color (red). The user can still tap on this icon to view how much time is left until the room is available.

2. Reserve Room

Users can tap the “reserve room” button on any of the conference rooms. Once the user taps on the button, a time & date picker pops up on the screen. The user can choose any date or time that is not grayed out. Any grayed out dates indicate that the room is not available during that time. The time and date picker also has a schedule of the room’s future reservations. If the user taps on one of the reservations in the schedule, another side pop-up box appears that indicates the contact name of the person who reserved the room during that time. Therefore, if the user really needs to schedule a room during a time when it is already booked, the user can contact the person who originally reserved the room.

Any room can be reserved with the Reserve Room button. When the user steps this button, the user can reserve the room using the time slot/date picker window.

Room Icons

Open / In Use Buttons

As mentioned previously, the open / in use buttons indicate to the user whether a room is currently available or not.

Room Capacity Icons

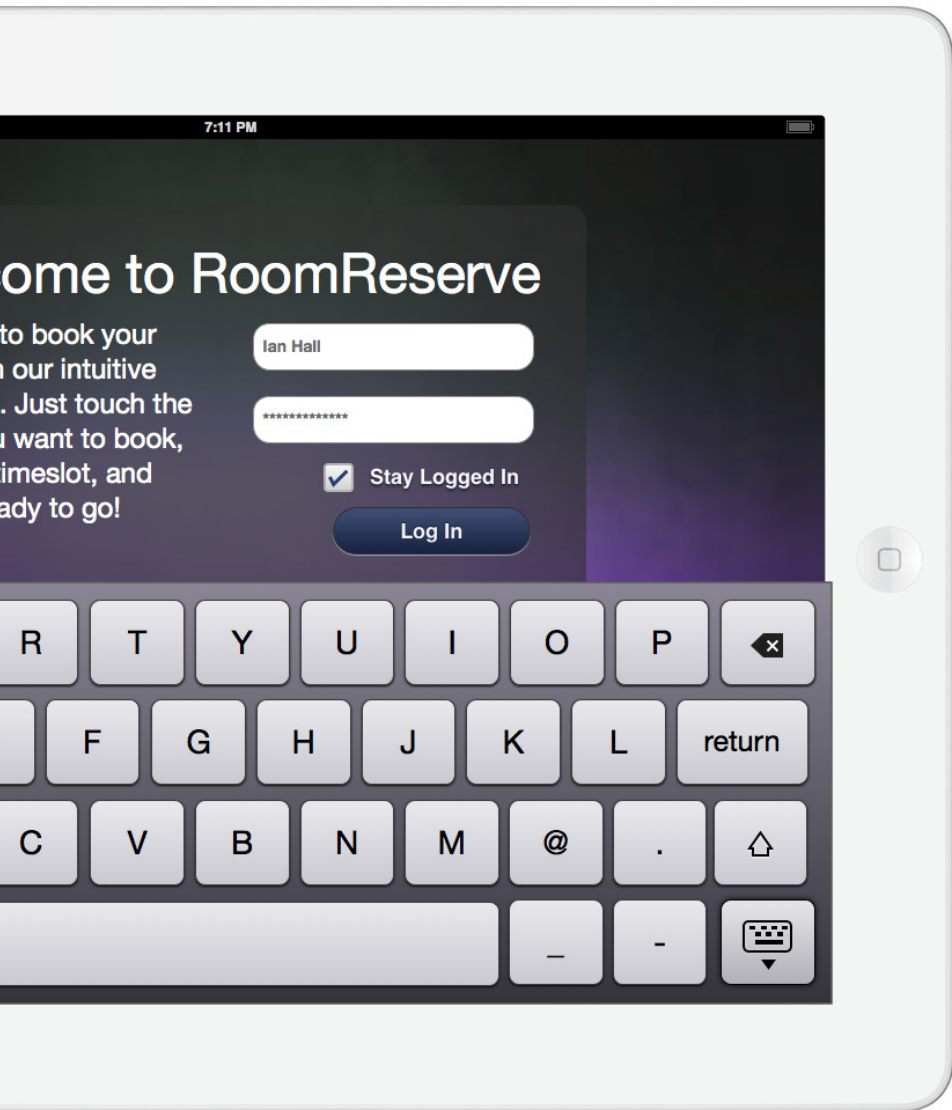
The room capacity icon (the image of a silhouette with a number next to it) is shown in each room to indicate the maximum number of people that can fit comfortably in that room.

Technology Equipment Icons

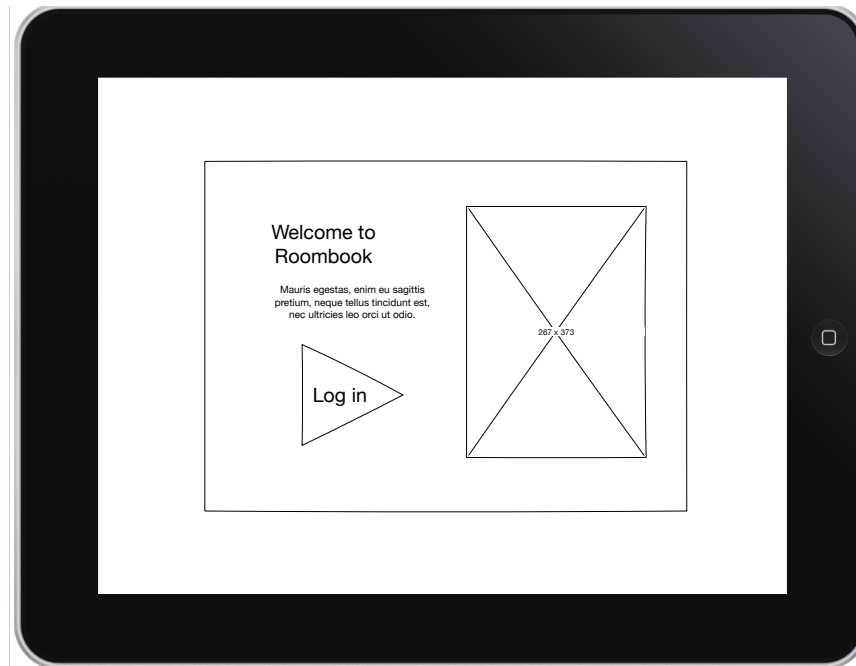
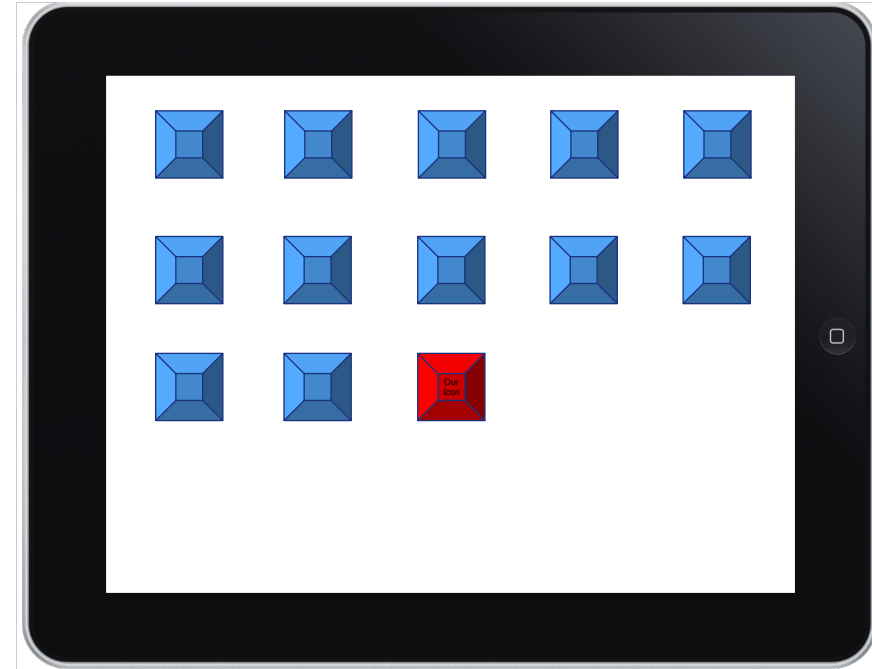
The technology equipment icons indicate what type of equipment is within the room. We made six technology equipment icons available for the Room Reserve app: (1) speaker phone; (2) apple TV; (3) projector; (4) PC computer; (5) Apple Computer; (6) web cam. For customization, we can provide additional tech icons to represent any types of equipment your company may use in your building’s rooms and meeting spaces.



Technology Icons



Icon on iPad Home Screen

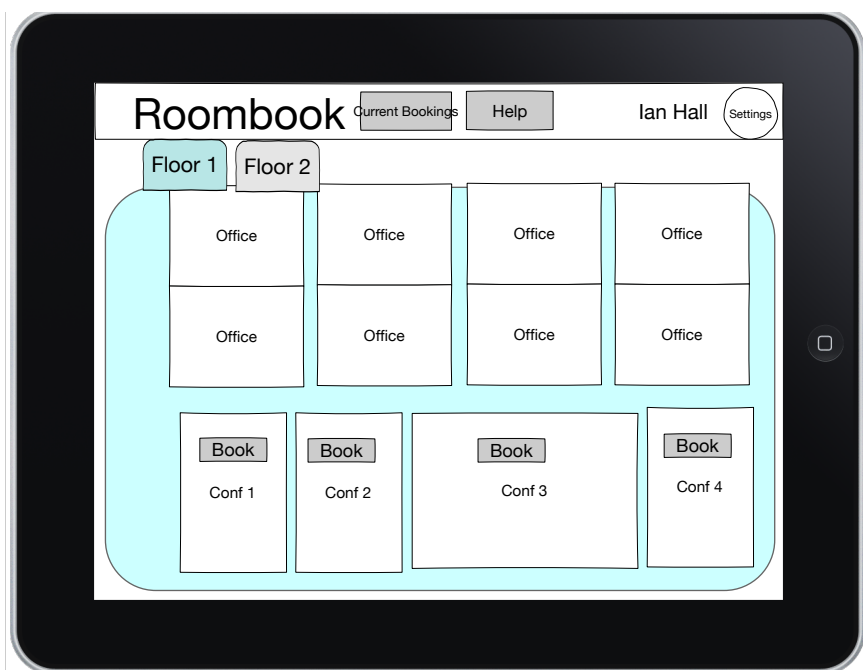
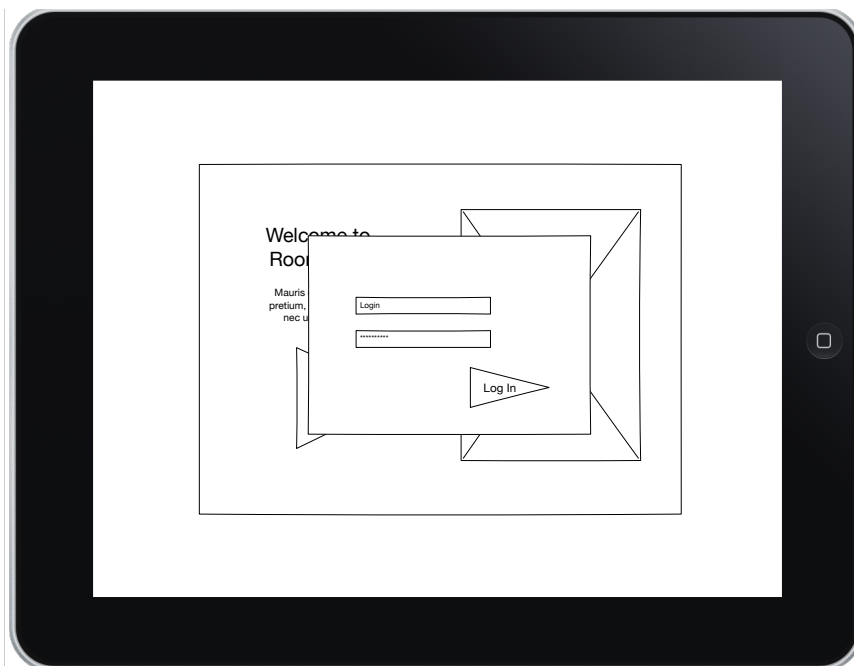


Opening Screen to Application

This wireframe is the screen once the user steps on the icon. It's important to have an "opening screen" of the application to show that the user opened the application, though the final version did not require the user to click "Log In" to get the log in screen.

Login to Room Reserve

This wireframe is the first interactive screen of the application, after opening it. Since this application may contain some sensitive material, we are requiring a log-in (though the user can check a box that allows them to stay logged in).



Home Screen

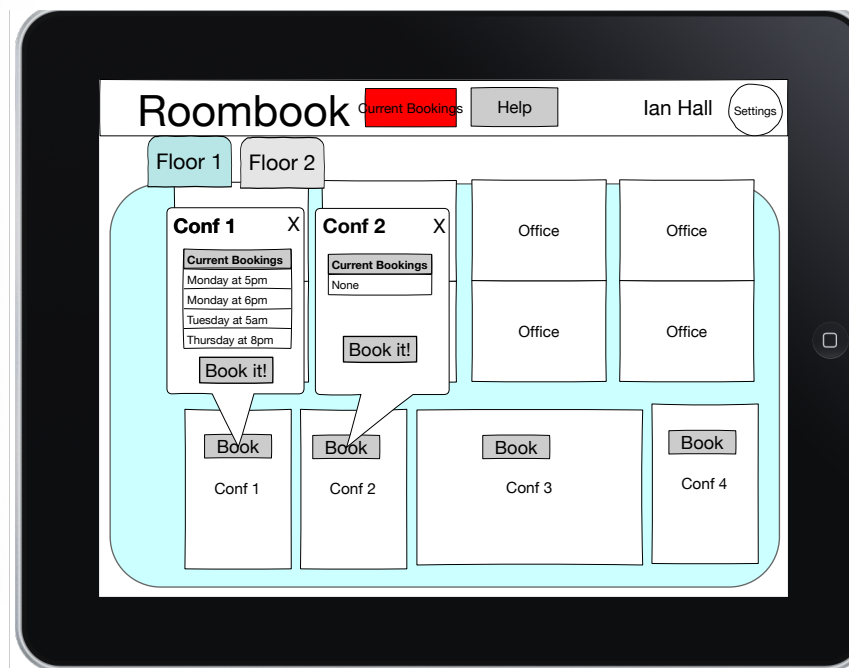
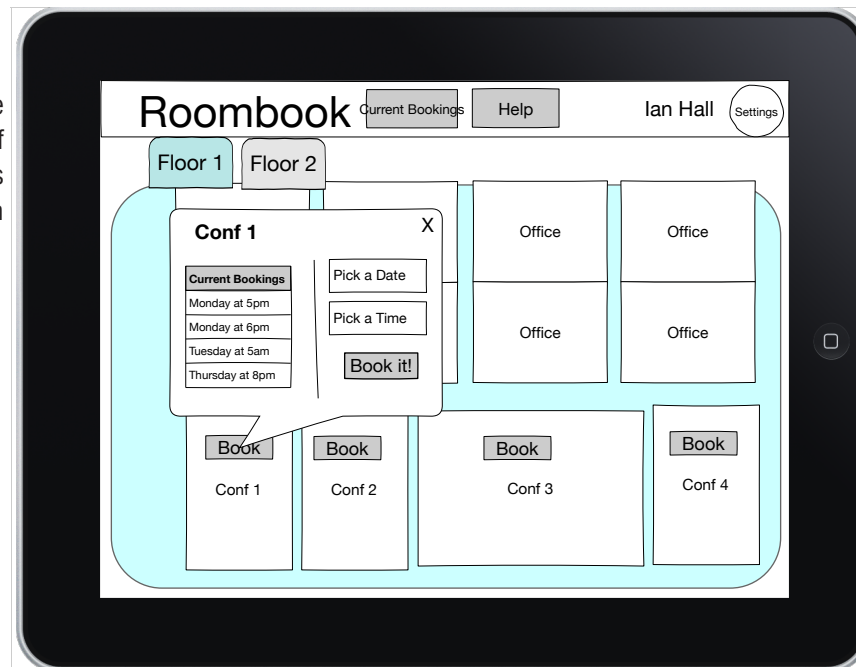
This is the wireframe of the homepage. Since the application is customized to the user, the user lands on the customized home screen, in this case, "floor 1".





Clicking on a Conference Room

This wireframe shows the functionality of clicking on one of the conference rooms. It shows the current bookings of the room and how to book the room.



Booking a Conference Room

This wireframe shows the act of booking another conference room (after clicking on the room).

USABILITY TESTING

Here are a few of the most common comments from our usability testing of the prototype for the Room Reserve app for the iPad, Version 1.0.

How do I make a reservation to one of the smaller rooms? (The user was indicating a cubicle/office space within the floor plan that was not an official conference meeting room.)

Where am I? Why is there no indication of what building this room is in and what the address of that building is?

I don't care about knowing what rooms are currently available to reserve. I always reserve rooms for meetings in advance.

Why do you have a dismiss button on the settings menu? How do I save the settings?

I don't care about seeing a floor plan. I want to see the rooms in a list view.

What if I need to book a room in a different building? My company has three different campuses in the Chicago area (two in the suburbs and one in the city; each campus has more than one building).

Under the reserve now function, what if I want to reserve the room for longer than 60 minutes? There is no option to book it for 2 hours or a whole day from this selection.

It would be nice if this had a calendar view and a list view option (The user was informed that it is possible to view reserved rooms in a calendar view by synching the app with Microsoft Exchange or Google Calendars.)

How do I search for a room with a specific type of equipment or amenity?

How do I add catering to the room reservation?

How do I invite meeting attendees to view my room reservation?





PERSONAS

Here are two personas that represent people who provided us feedback during usability testing.

Persona 1:

Name: Michael

Gender: Male

Occupation: Medical Sales - travels frequently and meets managers, business partners and prospective clients in various locations.

Age: 34

Education: B.A. in Chemistry

Tech Behavior:

- Prefers and uses Apple products
- Owns and uses an iPad and iPhone
- Uses several favorite iPad apps on a regular basis.

Michael grew up in a Chicago suburb. He is a busy father and husband with two young children. He is busy traveling for work on a daily basis. He spends much of his time commuting, meeting with business partners, managers and potential customers. He uses his iPad to demo products to prospective customers. He is busy and always on the go. He uses apps as tools to organize his busy schedule. Michael said he would use a room booking app like this with his business partners and maybe to reserve office space once he is in the office to do bookkeeping/paper work and to make phone calls. He said he would not use the app to book meetings with prospective clients because he usually meets them at their place of work or for a dinner or lunch meeting at a restaurant or even at a coffee shop.

Persona 2:

Name: Susan

Gender: Female

Age: 20

Profession: Student

Education: Working towards B.A. in Communications & Marketing

Tech Behavior:

- Prefers Apple products
- Owns and uses an iPad and iPhone
- Uses several apps on both her iPhone and iPad for staying organized with her class schedule; she uses a few apps designed for the students at the University she attends.

Susan is a busy student involved in many organizations and clubs on campus. She is a volunteer at the writing center. She also participates in and organizes games and practices for various intramural sports throughout the academic year. Susan says she would use an app like Room Reserve to organize places to meet up with her classmates, friends and professors. She also would reserve spaces for special events that her sorority organizes throughout out the year.

We will customize the design, look and feel of the Room Reserve app for the iPad for the company. We will incorporate the company branding, logos and color scheme into the Room Reserve template. We will also collect all the content we need to add the correct rooms and floors in the application from the company.

We will collect the following data on each room:

- Room name
- Room address/location
- Room amenities (i.e. technology equipment used supplied in the room)
- Room capacity

Based on all the content we collect, we will create custom graphics to that portray a realistic representation of the floor plans for the company's building.

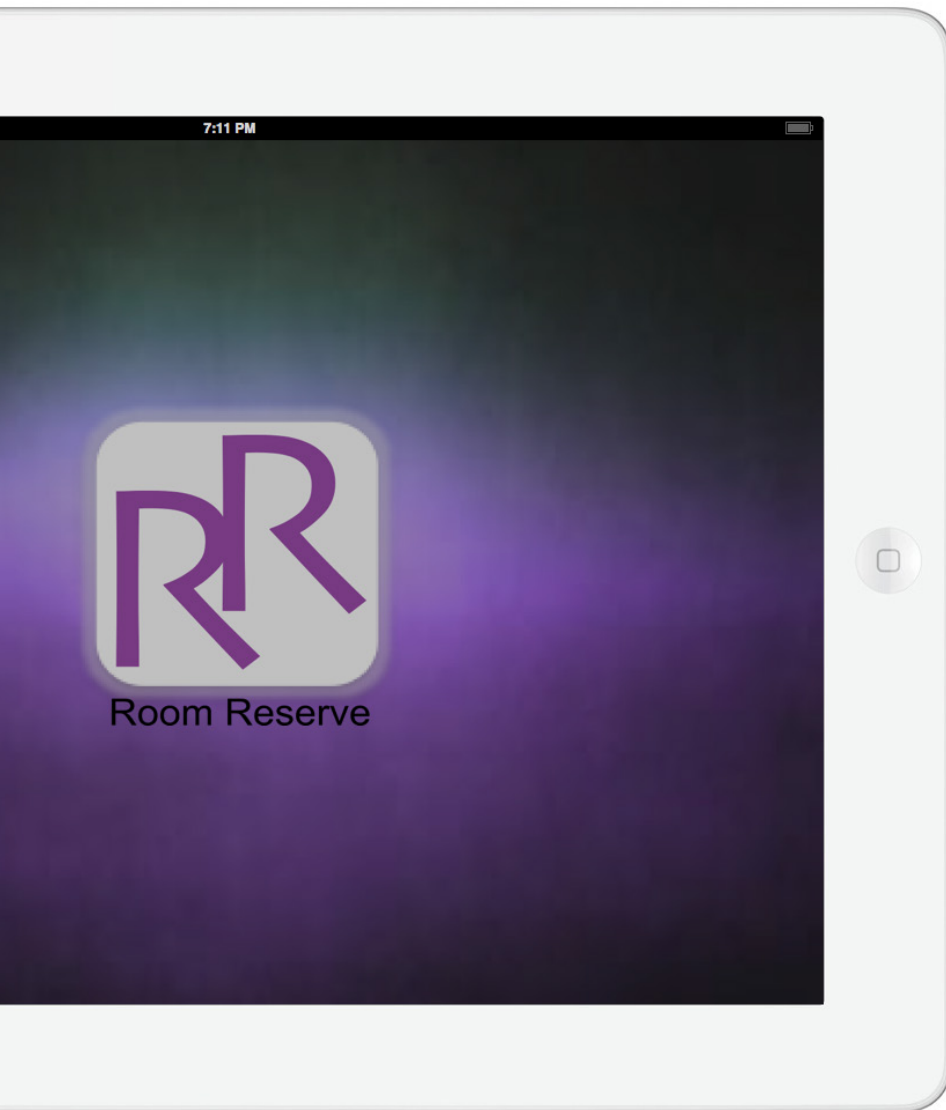
Also, we will provide a customized dropdown menu of the company's floors so that users can switch between viewing different floors in the company's building. If the company spans more than one building, we will add additional dropdown menus such as city, campus, and building to allow users to further specify the floor on which they would like to reserve a room.

Furthermore, we will custom design any additional icons the company needs to represent different types of room amenities or technology equipment that exists in the company's meeting rooms and spaces.

With these customizations, Room Reserve is the ideal application for any company wanting to improve employee productivity and wanting to make their employees happier with a more organized, comfortable work environment. Since this is the first prototype, we will continue to conduct usability testing to learn more ways we can further customize Room Reserve to better meet the needs of our customers.

The version number of "version 1.0" will show as the current version of the Room Reserve app in the settings map.





After conducting user testing, we have already made plans to make the following changes to the next version of the Room Reserve app for the iPad.

Future Features for Version 1.5

Add Additional Drop-Down Menus: City/Campus/Building/Floors

We had initially planned to customize the drop-down menus only for customers of larger, multi-building companies. In the next version, we will include these extra menu options as a standard for every customized Room Reserve app.

Add Additional Viewing Formats: List / Calendar / 3D floor plan

Several user participants indicated that they would like the option to view rooms in a list format. We would like to incorporate a list view format in Version 1.5. Also, we would like to incorporate 3D floor plans.

Settings Menu Changes

In Version 1.5, we want to re-incorporate most of the preference options within the main screen of the app itself. For example, we'd like to allow users to search for rooms by amenity, by room capacity and/or by location rather than having the user set up these preferences in a settings menu. The idea is that users may want to be changing their room preferences more often than other settings. The preferences options that will be used once or very infrequently will remain in the settings menu (i.e. sync with calendars, manage account, send feedback, sign out.)

Eliminate Help Menu

In Version 1.5, we'd like to remove the help menu to make space for more drop-down menus. We also hope that in the next version 1.5, the Room Reserve app will be easier to use and free of any bugs so that a help menu will not be necessary. We will still include the "send feedback" option on the settings menu.

Eliminate Available/Not Available Icons

If users continue to provide feedback that they do not need to know if a room is available now, we will remove this feature from the Room Reserve app in Version 1.5.

Improve Quality of Floor Map Graphics / Add Images of Rooms

Since users did not understand why or how they could reserve the smaller rooms on the floor map (which were actually "offices" and "cubicle" spaces and not conference meeting rooms), we hope to improve the graphics of the floor map in the future to decrease confusion. We also would like to build a program in the code of the app so the user can change the 2D view of the floor map to a 3D view of the floor map. We are also thinking of possibilities of including photos of the rooms in the app or graphics that realistically represent the look and feel of the actual room.

New Community Feature

In version 1.5 of Room Reserve, we would also like to give our clients the option to upgrade to a community feature built into the functioning of the app. Users of the app would be able to rate the room, write reviews and add their own photos to share the different ways they set up the room/space for various meetings and events. We are also thinking of even allowing users to add rooms to the app that may not be traditional conference meetings rooms but are regular meeting spaces by employees (e.g. the building's coffee shop or cafeteria, nooks/benches in the companies building).