

ROOMIIZE

Visualize,
Personalize, and
Collaborate —

Don't Just Move In —
ROOMIIZE It.

What is ROOMIIZE?

ROOMIIZE is an interactive 3D room planning web app built for university students to personalize, visualize, and collaborate on dorm room setups—before move-in day.

Problem

Dorm rooms are often small and come with pre-set furniture that can't be moved. New students might struggle with making the space functional, comfortable, and personal, while adhering to dorm rules.

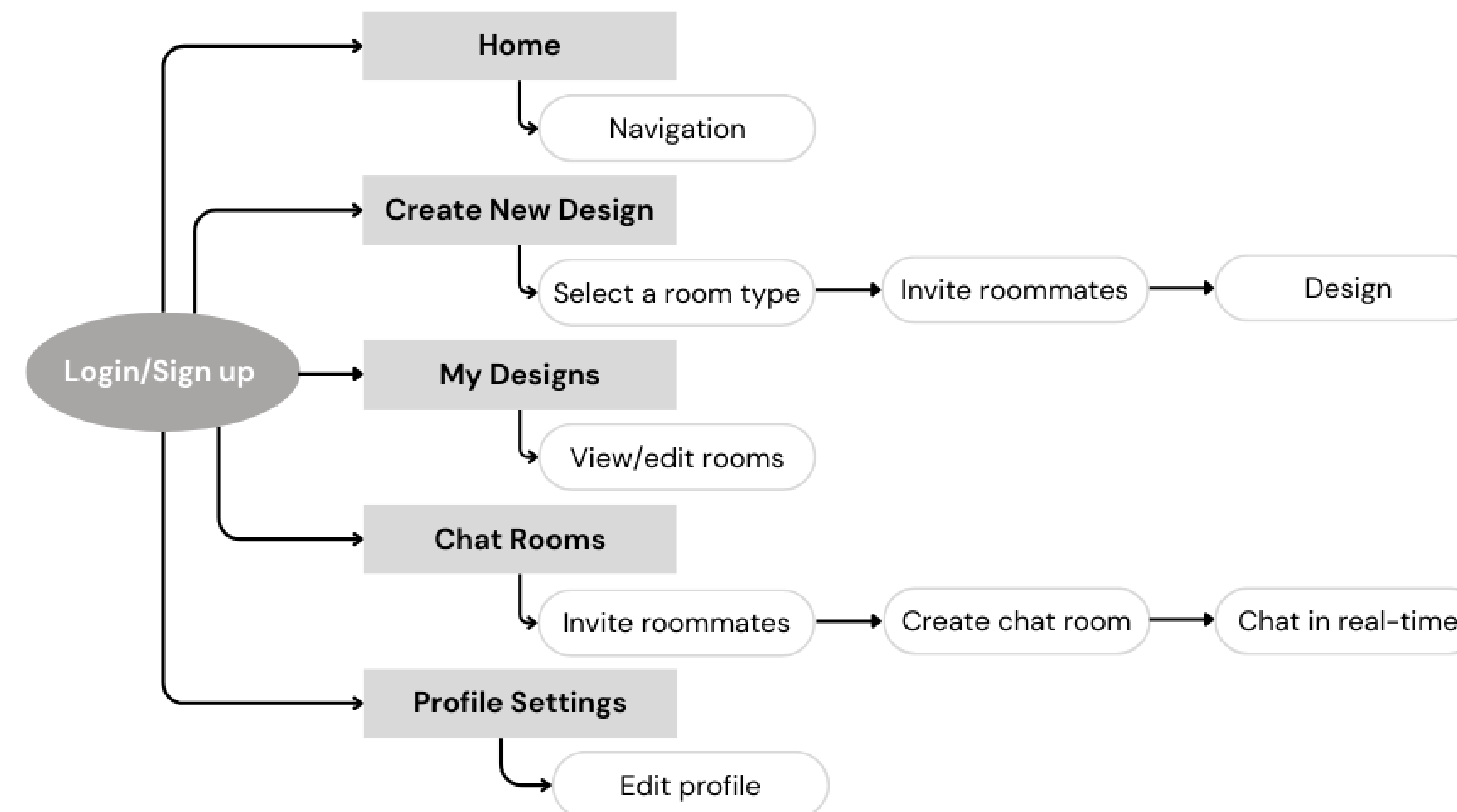
Solution

We aim to create a seamless experience making it easy for students to create a personalized and functional living space that follows school regulations .

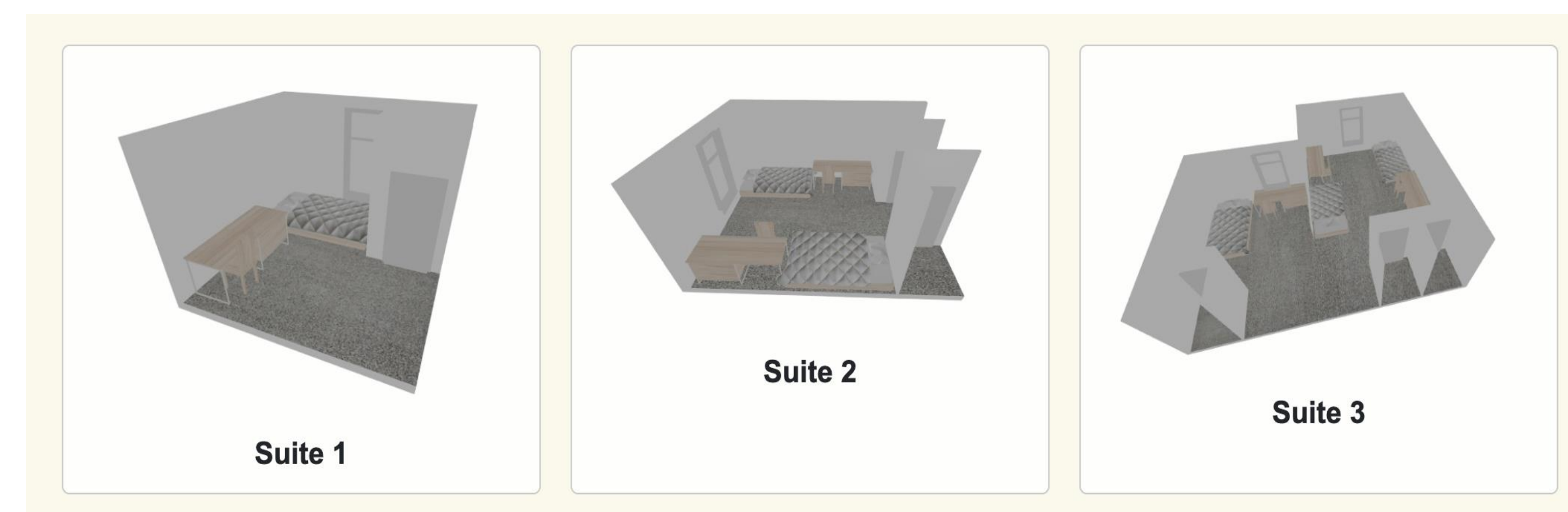
Features

- Account creation and authentication
 - Google auth/sign up
 - Profile editing
- 3D Room Design
 - Interactive tools
 - Drag-and-drop, rotate, and place 3D objects
 - Save/load full room state (objects, camera position)
- Real-time chat room
 - Invite-only room access with approval flow

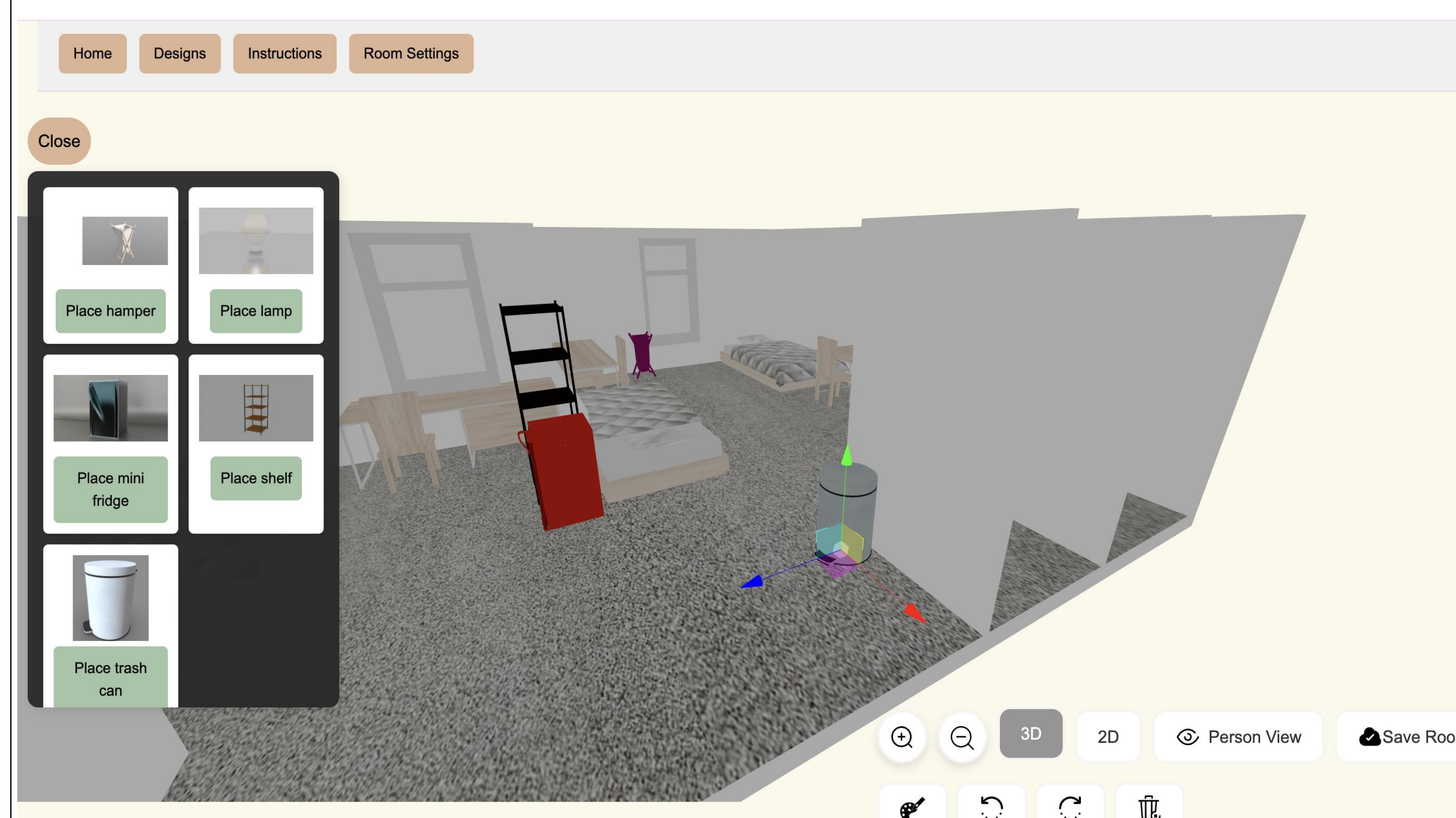
Workflow of app



App UI



Dorm Options



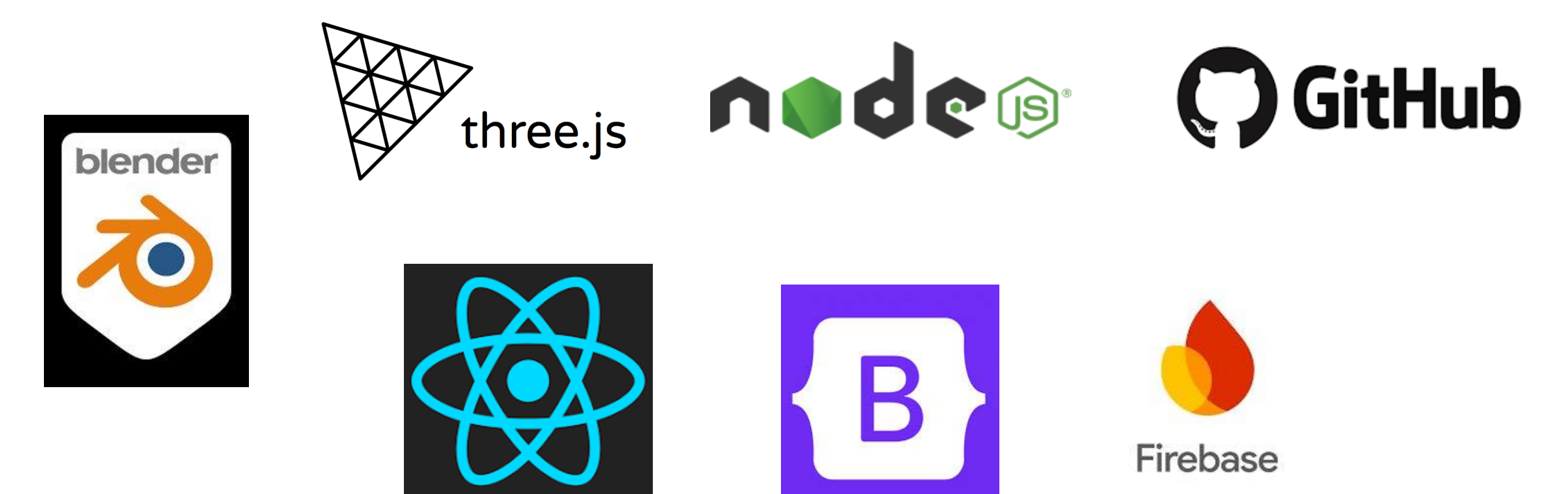
3D Room Design Canvas

Timeline

August - September	October - December	January - March	March	April
Research	Planning / Design	Development	Testing	Deployment
<ul style="list-style-type: none">Explore 3d designDefined core purpose of appResearched technologies	<ul style="list-style-type: none">Finalized tech stackFinalized team rolesCreated wireframes for pagesPlanned user flowDesigned UX for 3D controlsSet up GitHub with project foundationSet milestones	<ul style="list-style-type: none">Implemented Firebase Auth and Firestore storage structureDeveloped room selection and creationSynced camera position, object state, and room metadata to FirestoreChat Room integrationFirebase App check integration and security settings	<ul style="list-style-type: none">Tested user authentication and Firestore rulesVerified room controls and object movement	<ul style="list-style-type: none">Cleaned up code and removed development only console logsDeployed to Firebase Hosting with public access

Development Tools

- Frontend:**
 - React Native
 - React Three Fiber, Drei
 - Bootstrap
- Backend:**
 - Node.js
 - Firebase: Auth + Firestore + Storage + App Check
- 3D Assets:** Blender, three.js
- Version Control:** GitHub



Development Team

Andrea Serrano	Backend: Firebase Management, Integration btw front + back, User Auth
Ana Rivera	Backend: Firebase Management, Chat Room development, UI
Eliana Gamino	Frontend: 3D Models, Interactive Features
Bryan Barrios	Frontend: 3D Models, App UI