Office Door Kiosk

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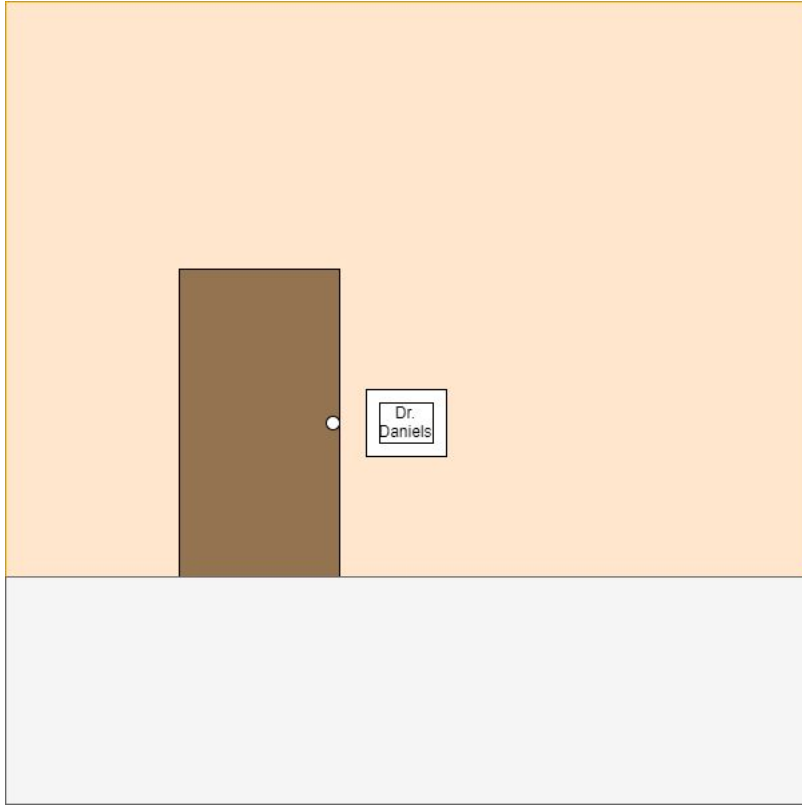
Dr. Thomas Daniels

Project Plan - Problem Statement

- Office hours are important for student success

- Professors are busy

- Face to face meetings can still be difficult

  - Student not available during office hours

  - Professor may be out of office for a few minutes and miss students

- Relaying simple information requires too many emails

- Need a way to improve communication

Project Plan - Conceptual Sketch

- Office door kiosk

- Features act as widgets

- Professor admin controls

- Student users

- Secured tablet mount

Project Plan - Constraints and Considerations

- Information Security / Legal Concerns

- Powering

- Costs

- Theft

Project Plan - Functional Requirements

- Remotely updated kiosk owner information

- Configurable professor homepage

- Leave notes for students

- Video chat between kiosk and mobile app

- Customizable calendar

- Students can schedule meetings through the kiosk

- "Door bell" feature - alert professor that someone is at his door

- Acquire a secure enclosure for the device

Project Plan - Non-functional Requirements

- Kiosk must be resistant to thieves and malicious users

- Must be removable by authorized personnel

- Responsive UI

- Any number of professors should be able to have accounts

- Kiosk has restricted access hours

Project Plan - Market Survey

- Many products implement some features
  - Email, Discord, Skype, etc
  - None implement all desired features
- Future flexibility with custom code
- Platform agnostic
- Designed for professor/student interactions
  - By Iowa State students

System Design - Technologies Used

- React Native and Redux

- Node.js

- NoSQL database

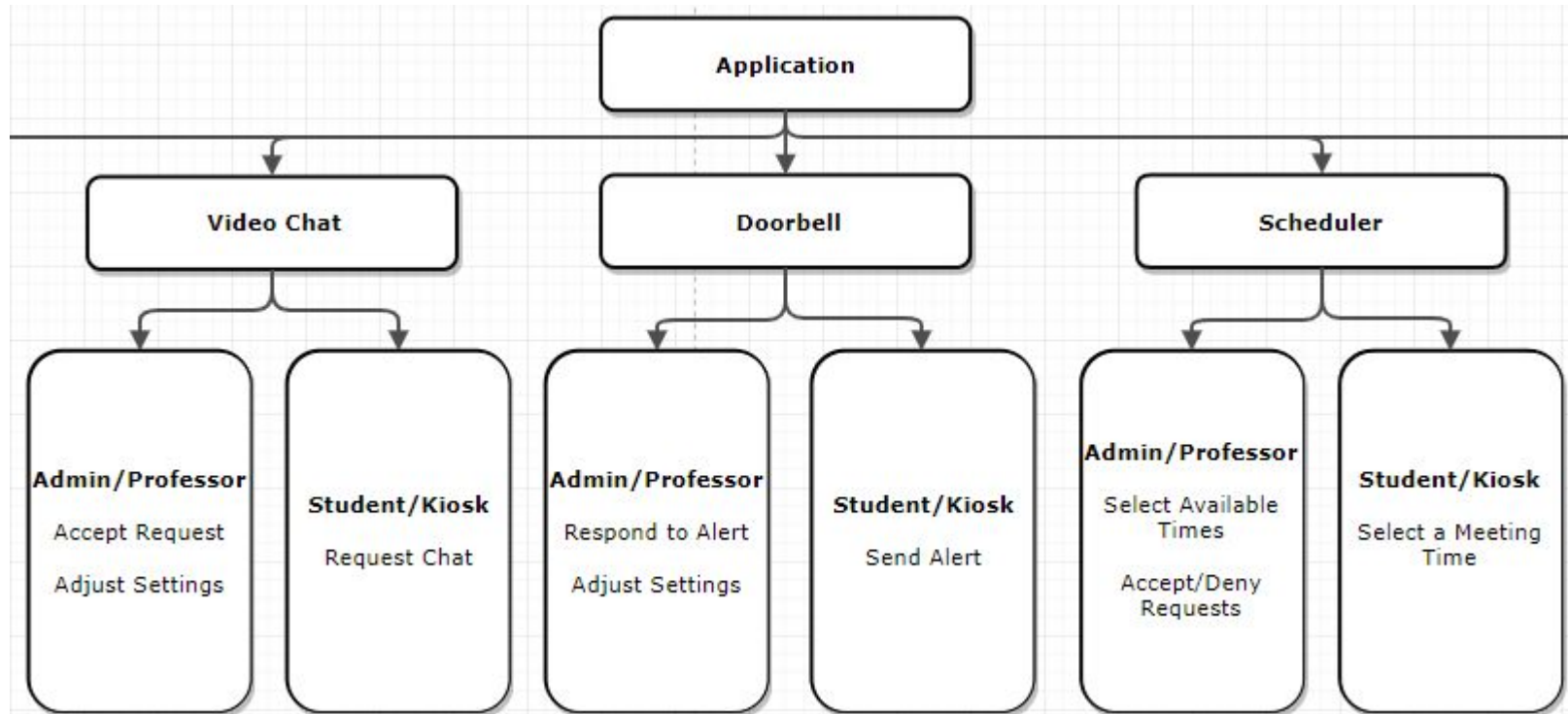# Project Plan - Risks and Mitigation

- Risks
  - Lack of Experience with Technology
  - Time Constraints
- Mitigation
  - Individual training for React Native, Redux, and node.js
  - Allow time for errors

Project Plan - Resource/Cost Estimation

- Fire HD 8 Android Tablet (6th Generation): ~$34

- Freedom Secure Universal Screw Mount Tablet Stand: ~$90.00

- Total: ~$124

Project Plan – Milestones and Schedule

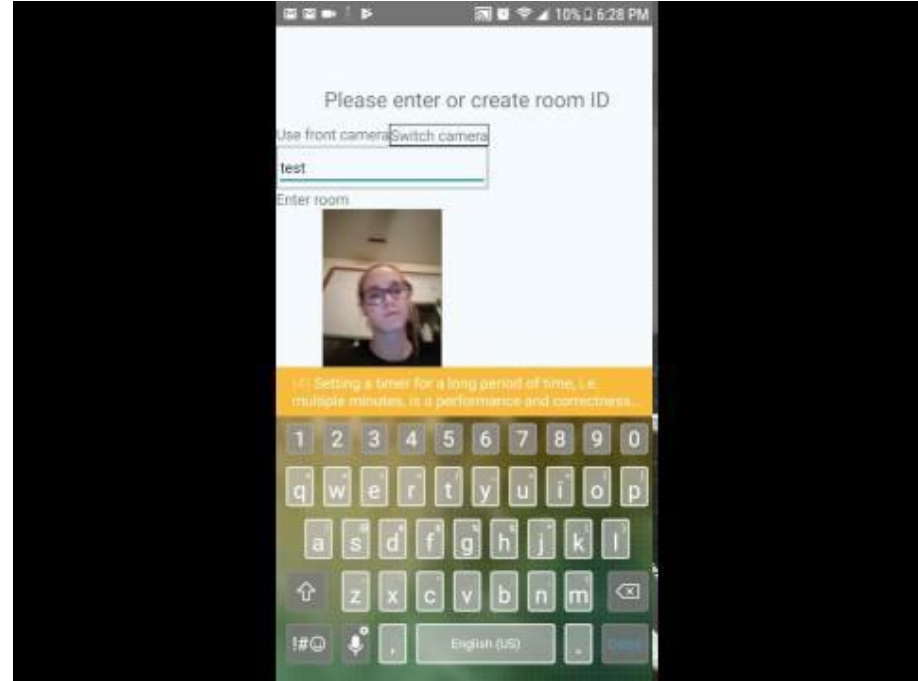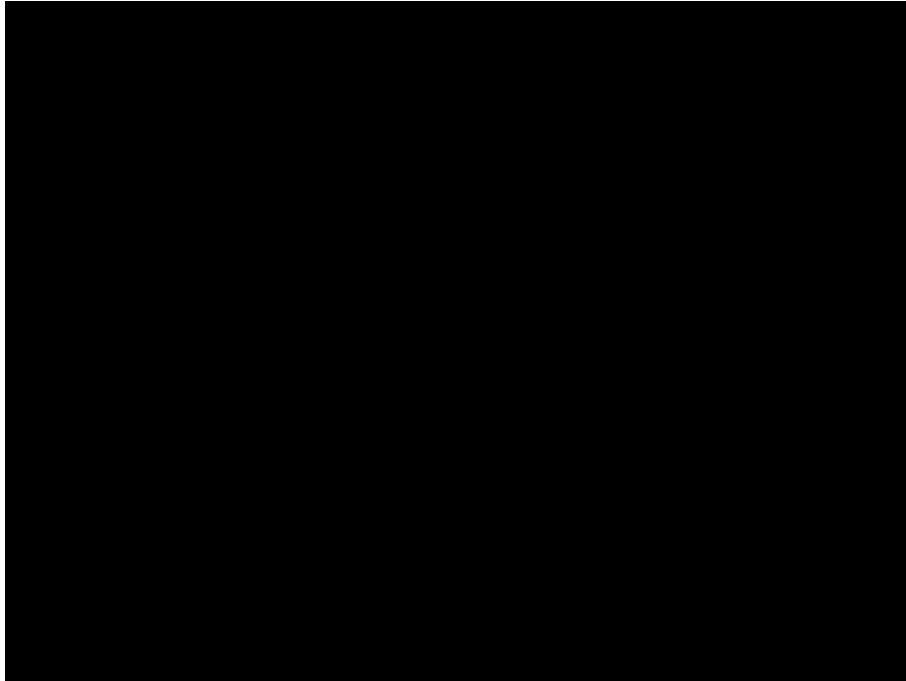# System Design - Functional Decomposition

System Design - User Interface/Experience

- Provided components
  - React Native, Native Base
- Custom components
  - UIComponents
- Platform agnostic
- Decoupled widgets
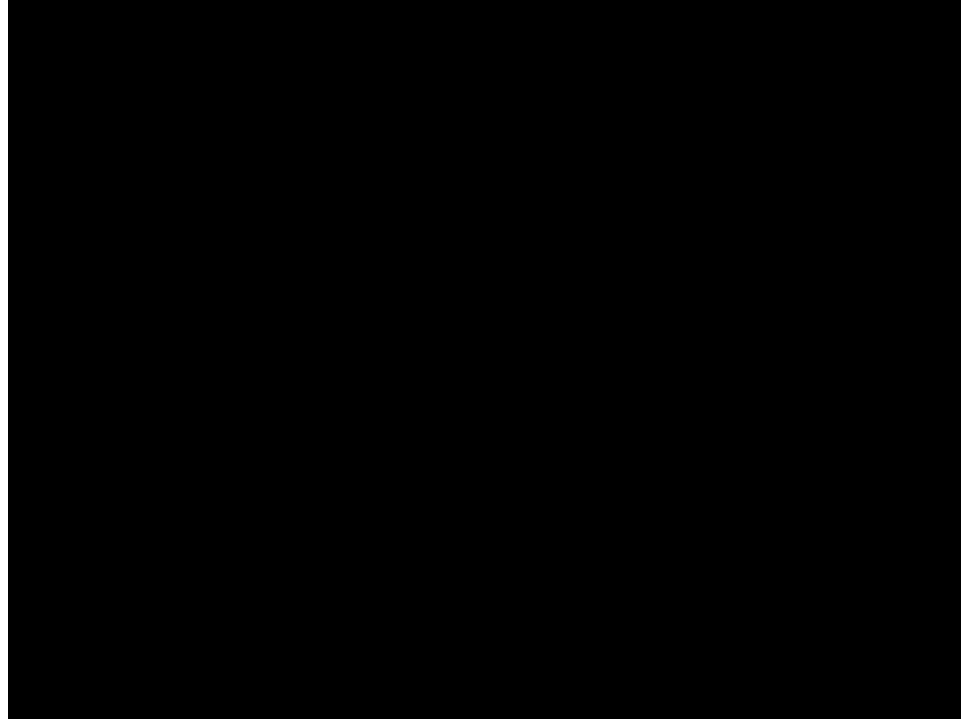- User accessibility

System Design - Test Plan

- Automated Functional Testing
  - Data retrieval
  - Remote updates
- Field Testing
  - Video chat
  - Push notifications
  - Look and feel

Conclusion - Current Project Status

Conclusion – Current Project Status

Conclusion - Next Semester

- Integration of building blocks

- MVP

- UI Polish

- Testing - Automated and General User

Questions?