The Virtual Office Door

The Conquistadoors

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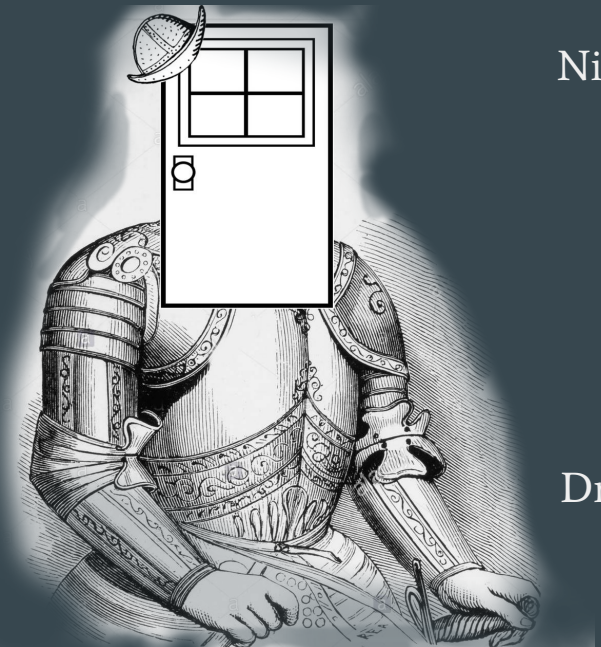
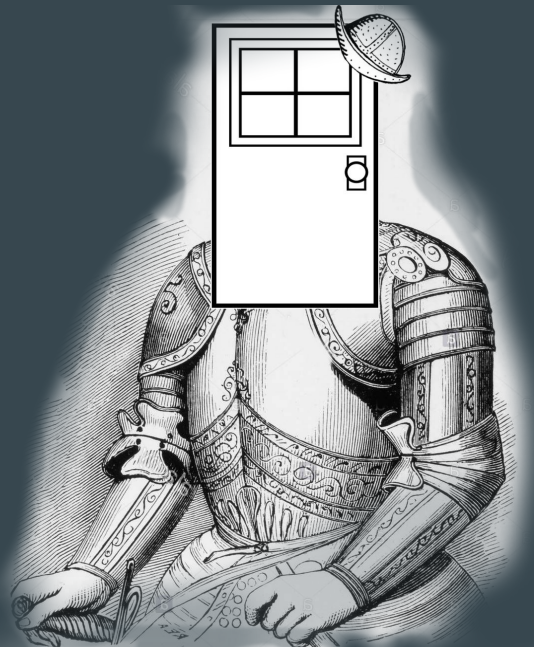
Our Mentor:
Dr. Eck Doerry

Our Clients:
Dr. Eck Doerry and Dr. Michael Leverington





The Big Picture

- Office doors serve as a form of communication (e.g. notes, flyers, calendars, etc.)
- Many different people need access to office door information
  - Professors, Students, Managers, and working professionals
- Millions of people utilize office doors as a form of communication
- Communication is essential but a physical presence can be challenging.

The Even Bigger Picture

Direct Communication

- Emails, Phone Calls, Text Messages, Paper Handouts, Voice Messages
- Message is sent to those that need to hear or read the message.

Indirect Communication

- Bulletin Board Postings, Posted Sticky Notes, Public Calendar Postings
- Message is posted so that readers need to go seek out the information
- Where the main problem lies!

The problem in an academic context...

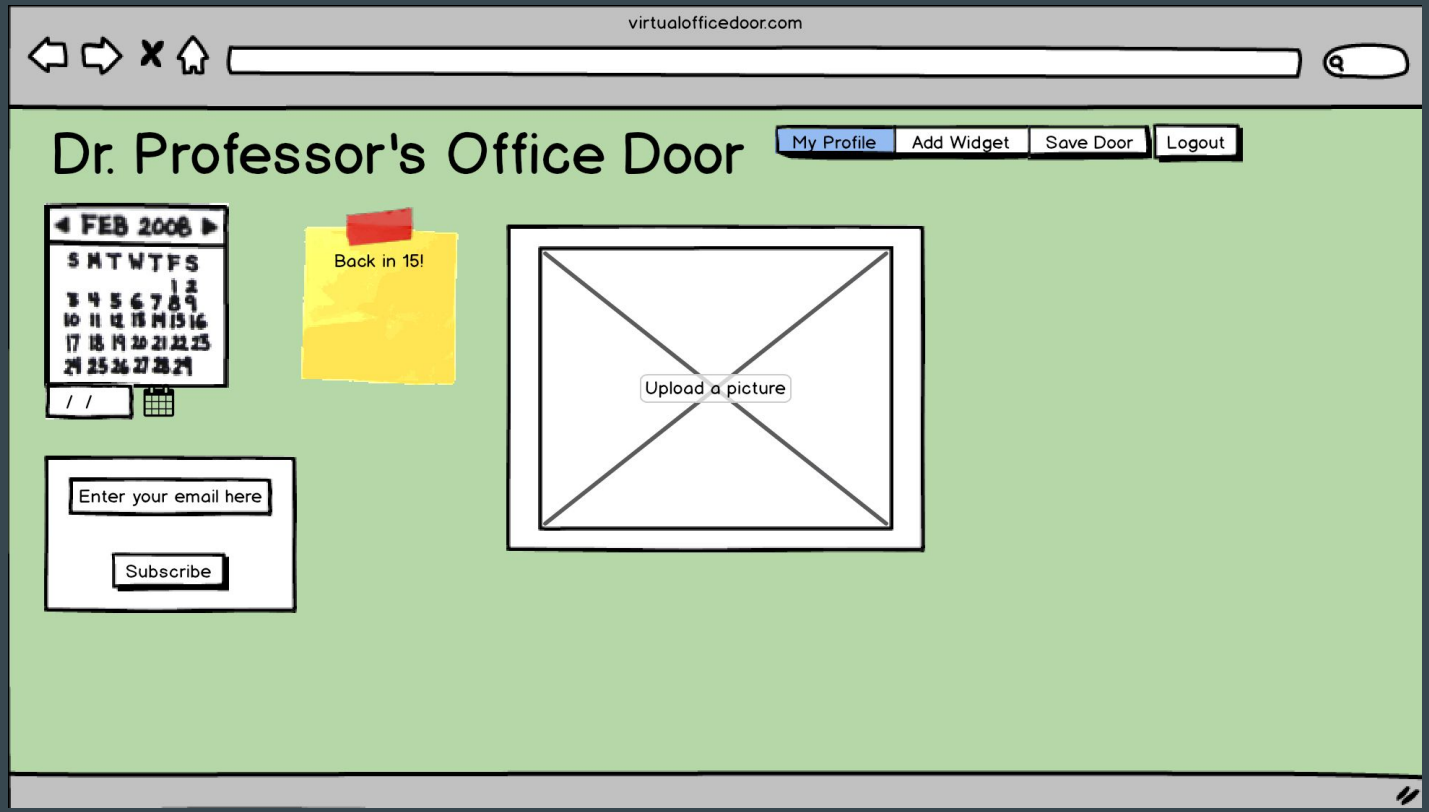
- Computer Science is split between Engineering on South campus and SICCS on North campus
- Teachers still use office doors, but they become cluttered.
- Email communication with students is slow and unreliable
- Teacher office hours are always subject to last minute change
  - No way to communicate this to the students in a timely manner

- Teachers need an easy way to inform students
- Students need an easy way to get informed

Solution: A Virtual Office Door

- We envision a secure, fast and account based Web 2.0 application that operates as a “virtual office door”.
- The “office door” can display:
  - Calendar with events vs. BBLearn current system
  - Sticky notes for quick alerts vs. manual email sendouts.
  - Notification widget to instantly inform users of pertinent updates
- Accessible on a laptop/mobile device as well as a physical office door display.
- Allows users to receive communications from door owners, which turns indirect communication into direct.

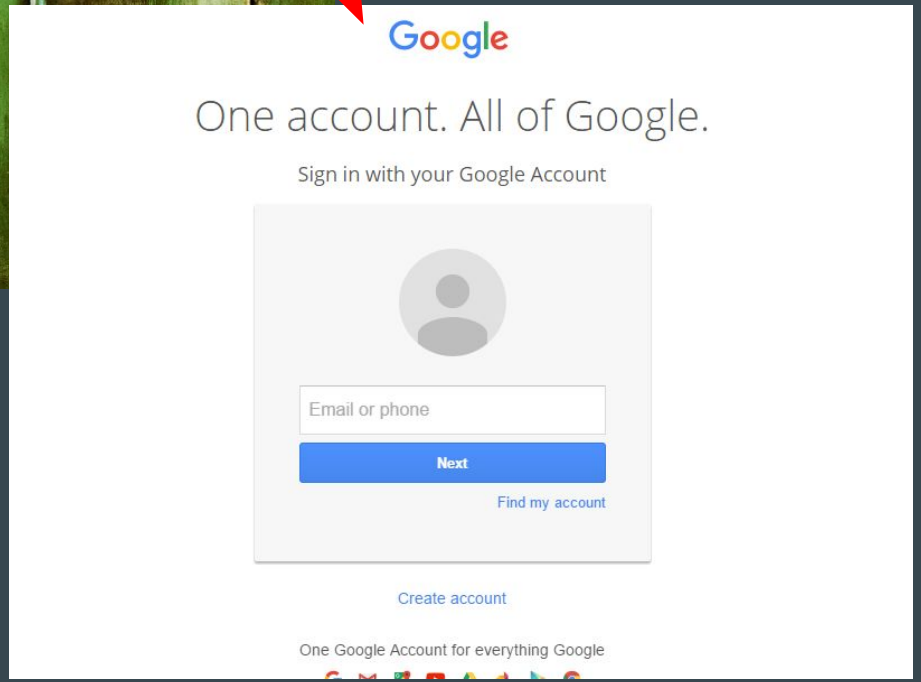
A Virtual Door Mockup

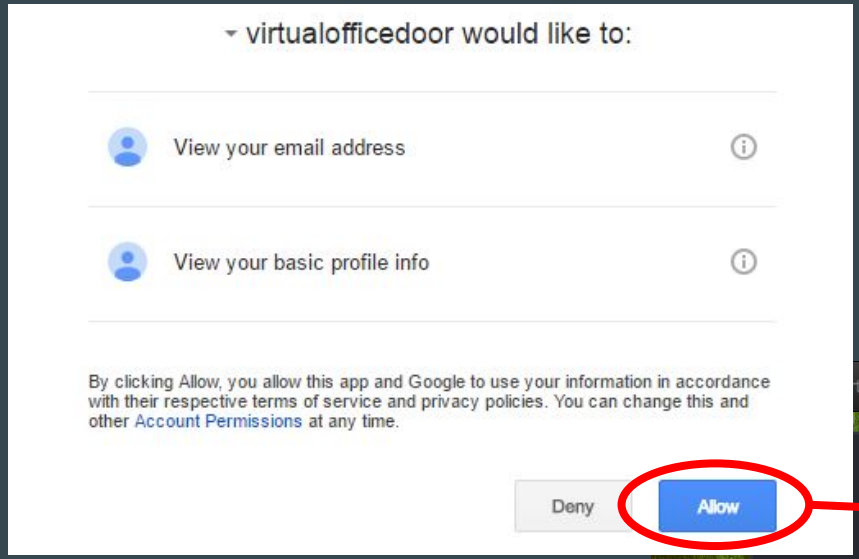


Our main requirements...

1. Customizable office door with widgets
2. Cloud based server to deploy the application and store data
3. Secure and reliable login to maintain sensitive user information.
4. A basic notification system between the office door owner and a guest.


The Virtual Office Door
Home
About
Sign in with Google+
The Virtual Office Door
Welcome to the Virtual Office Door website! You can get started by signing in above.


Google
One account. All of Google.
Sign in with your Google Account
Email or phone
Next
Find my account
Create account
One Google Account for everything Google


virtualofficedoor would like to:
View your email address
View your basic profile info
By clicking Allow, you allow this app and Google to use your information in accordance with their respective terms of service and privacy policies. You can change this and other Account Permissions at any time.
Deny
Allow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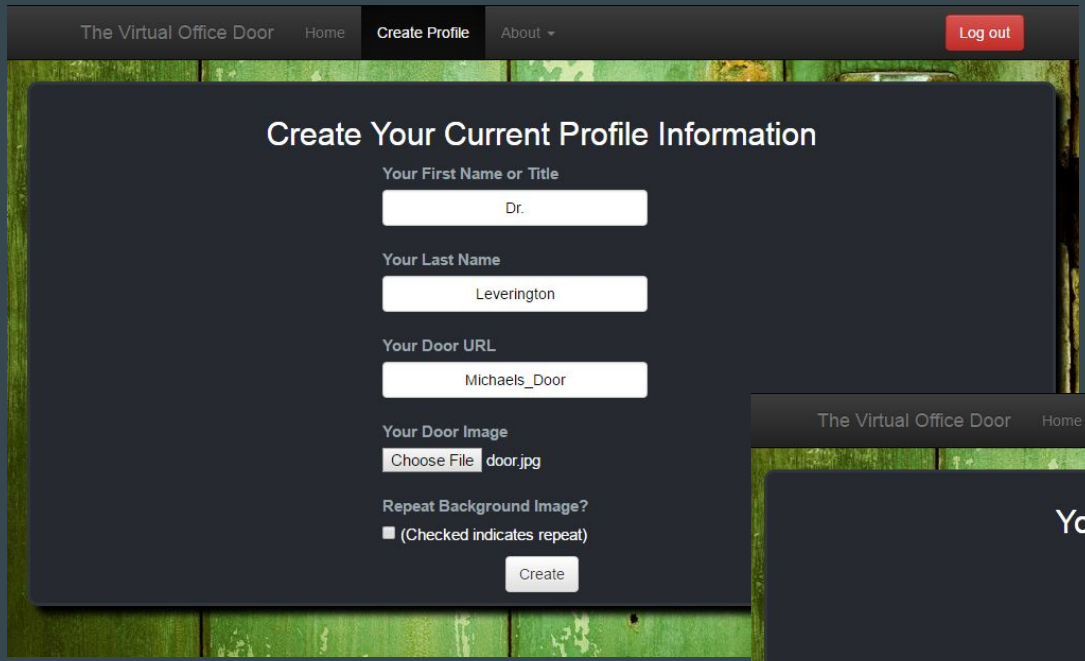
The Virtual Office Door
Hello Michael Leverington!
Use the links in the navbar to navigate the website.


The Virtual Office Door
Home
Create Profile
About
Log out
Create Your Current Profile Information
Your First Name or Title
Dr.
Your Last Name
Leverington
Your Door URL
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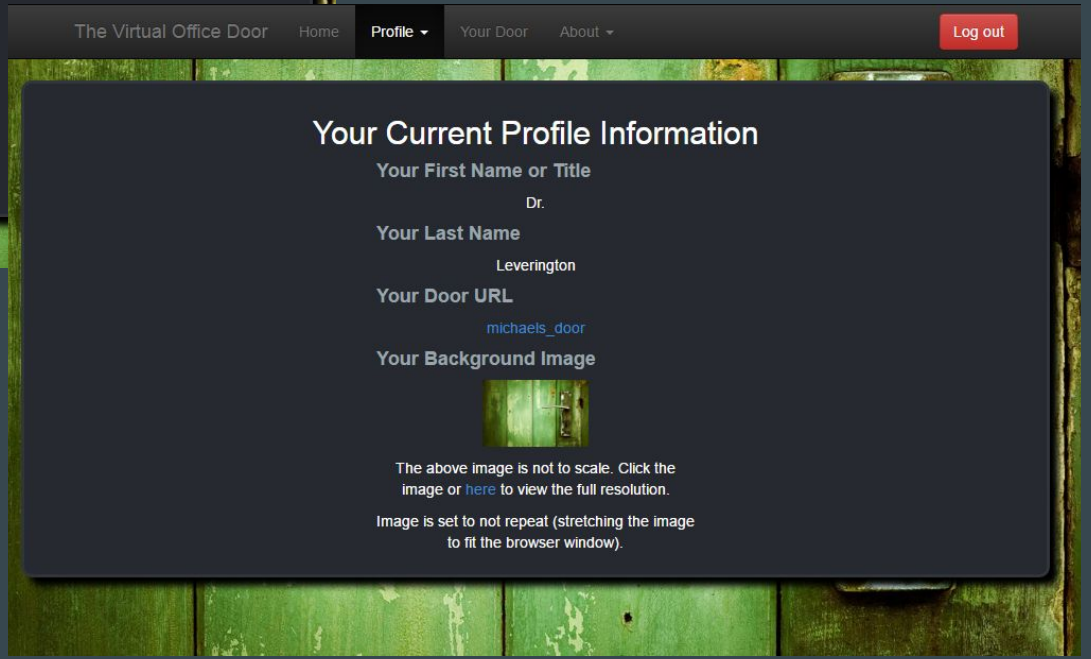
The Virtual Office Door
Home
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Your Door
About
Log out
Your Current Profile Information
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Dr.
Your Last Name
Leverington
Your Door URL
michaels_door
Your Background Image
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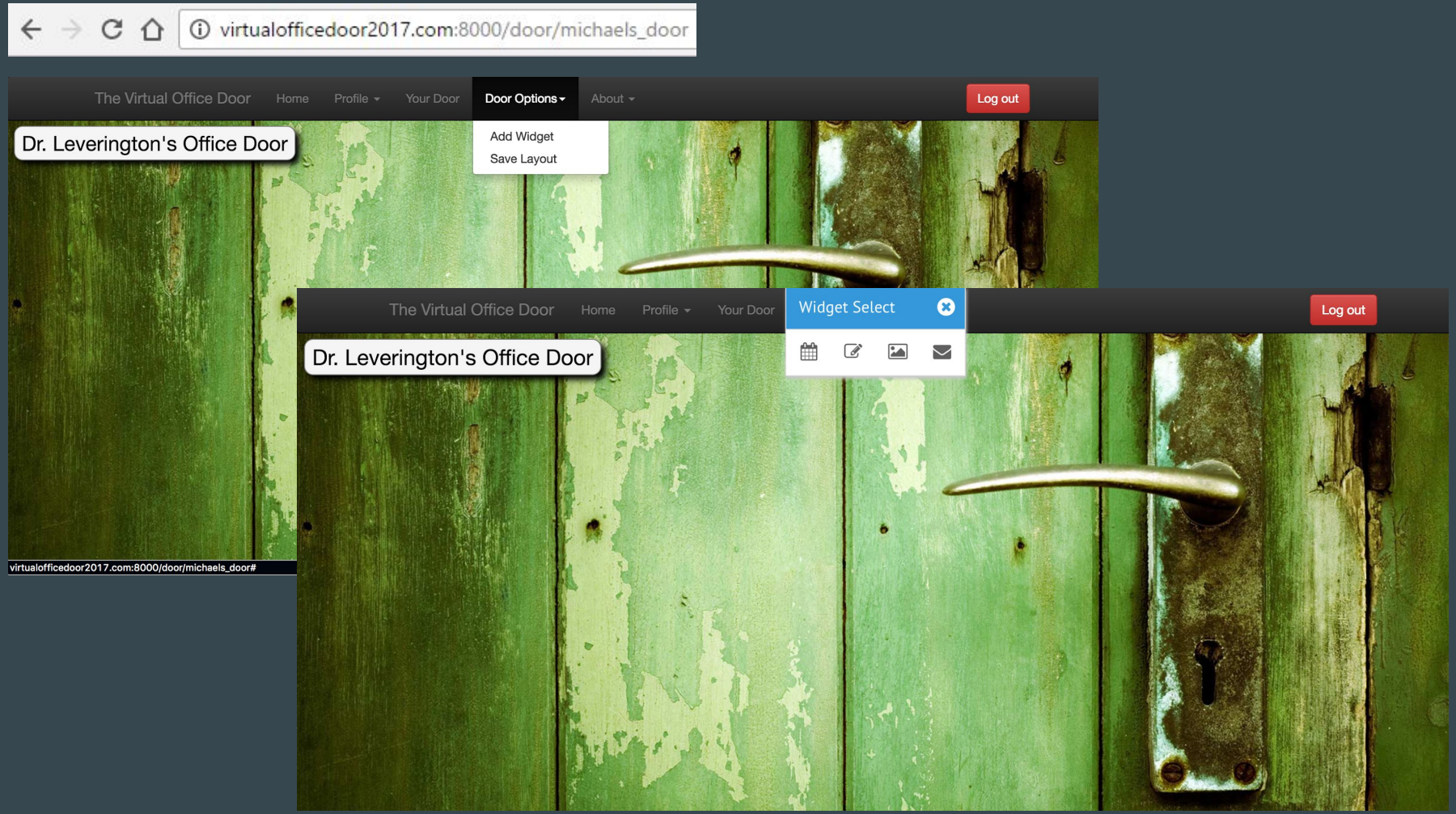
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The Virtual Office Door
Home
Profile
Your Door
Door Options
About
Log out
Add Widget
Save Layout
Dr. Leverington's Office Door
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The Virtual Office Door
Home
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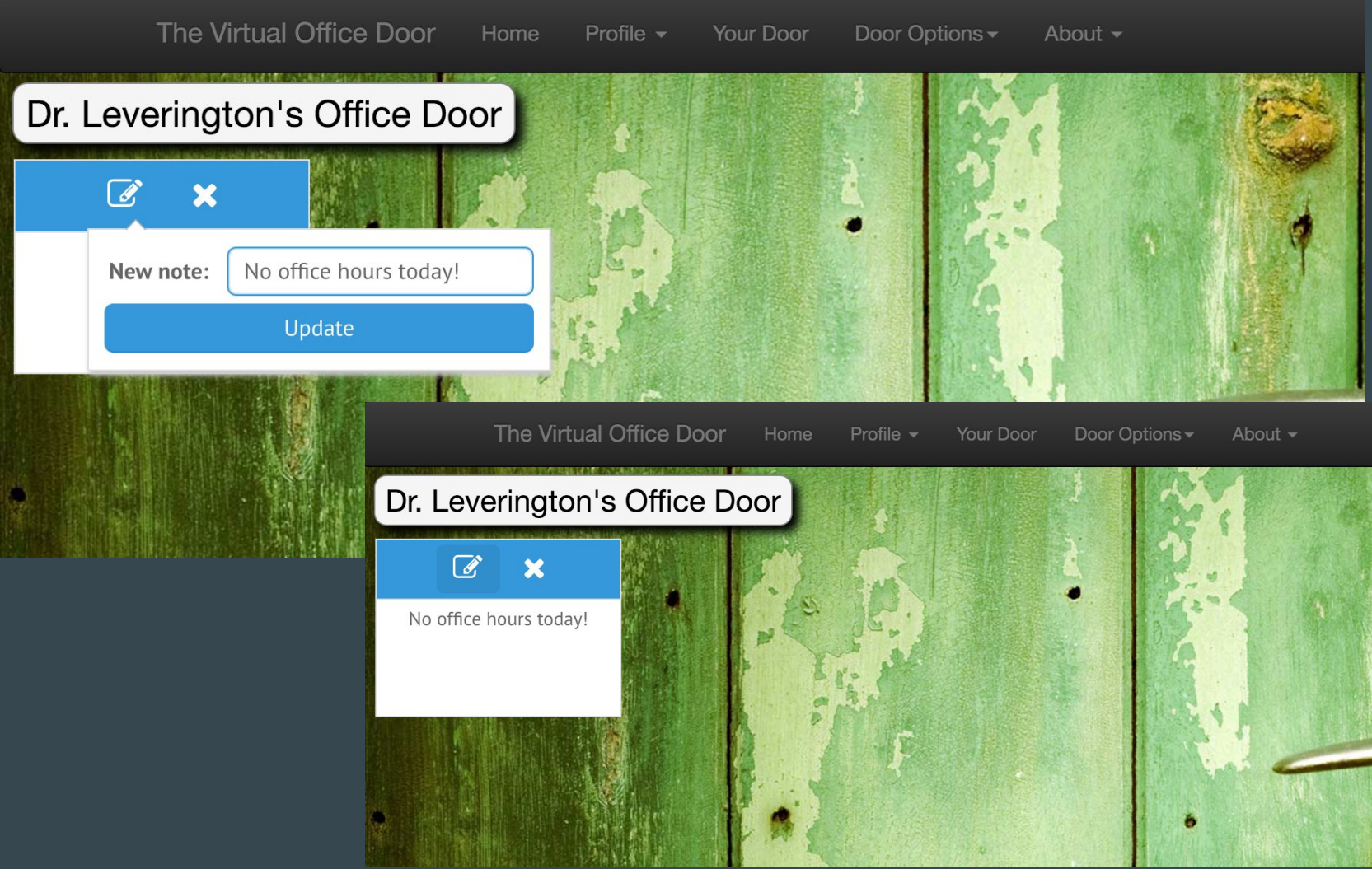
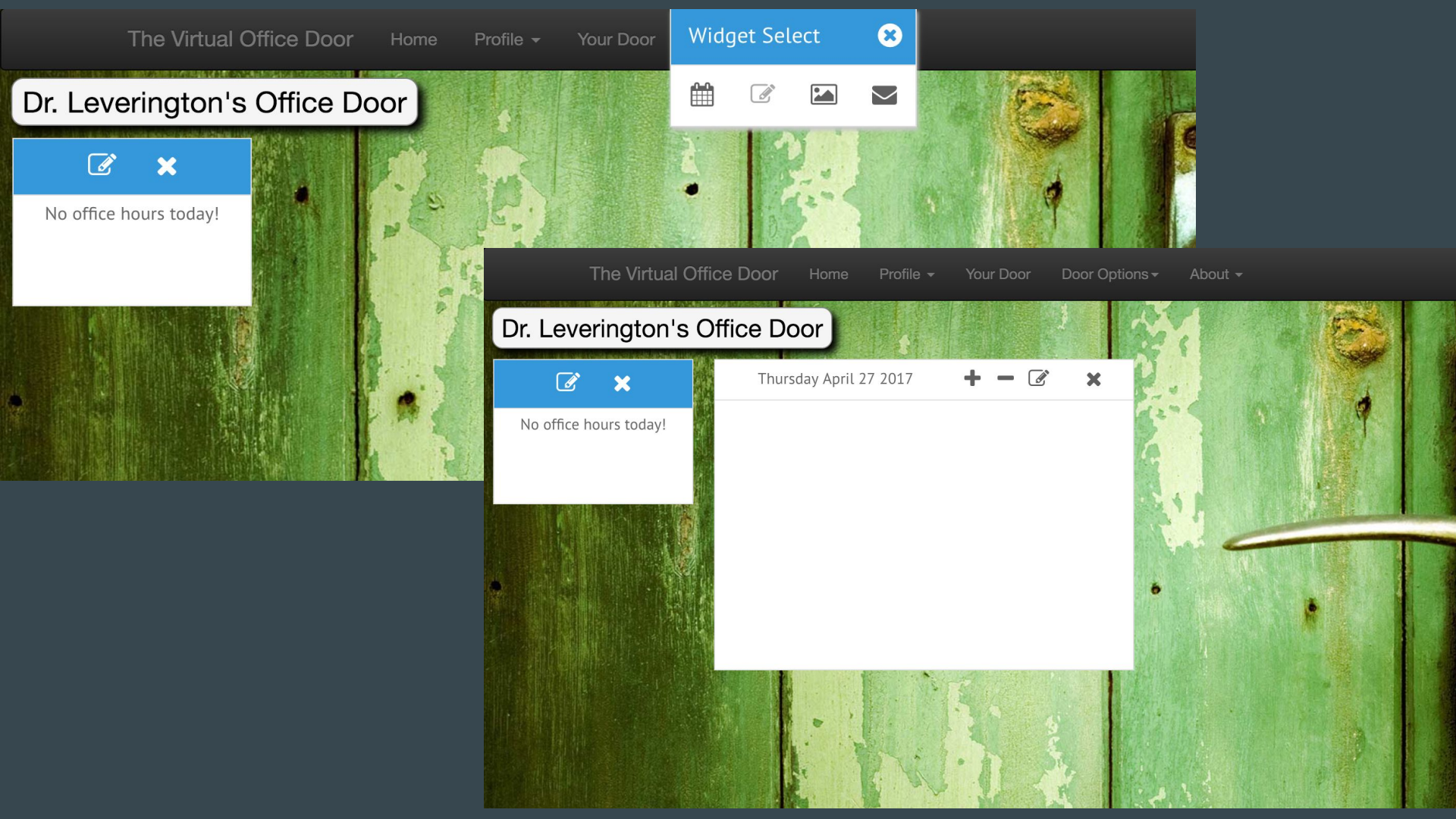

The Virtual Office Door
Home
Profile
Your Door
Door Options
About
Dr. Leverington's Office Door
New note:
No office hours today!
Update
The Virtual Office Door
Home
Profile
Your Door
Door Options
About
Dr. Leverington's Office Door
No office hours today!


The Virtual Office Door
Home
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Widget Select
Dr. Leverington's Office Door
No office hours today!
The Virtual Office Door
Home
Profile
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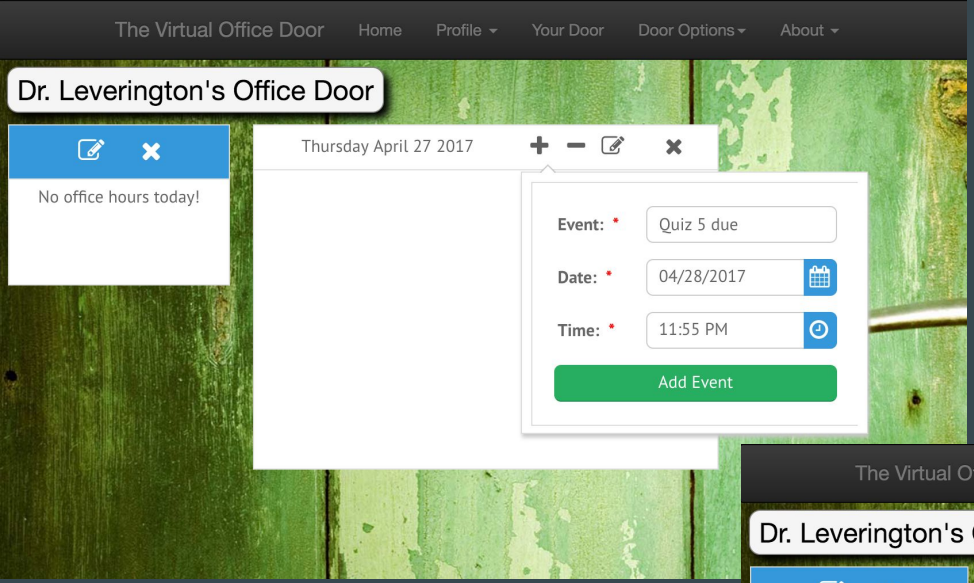
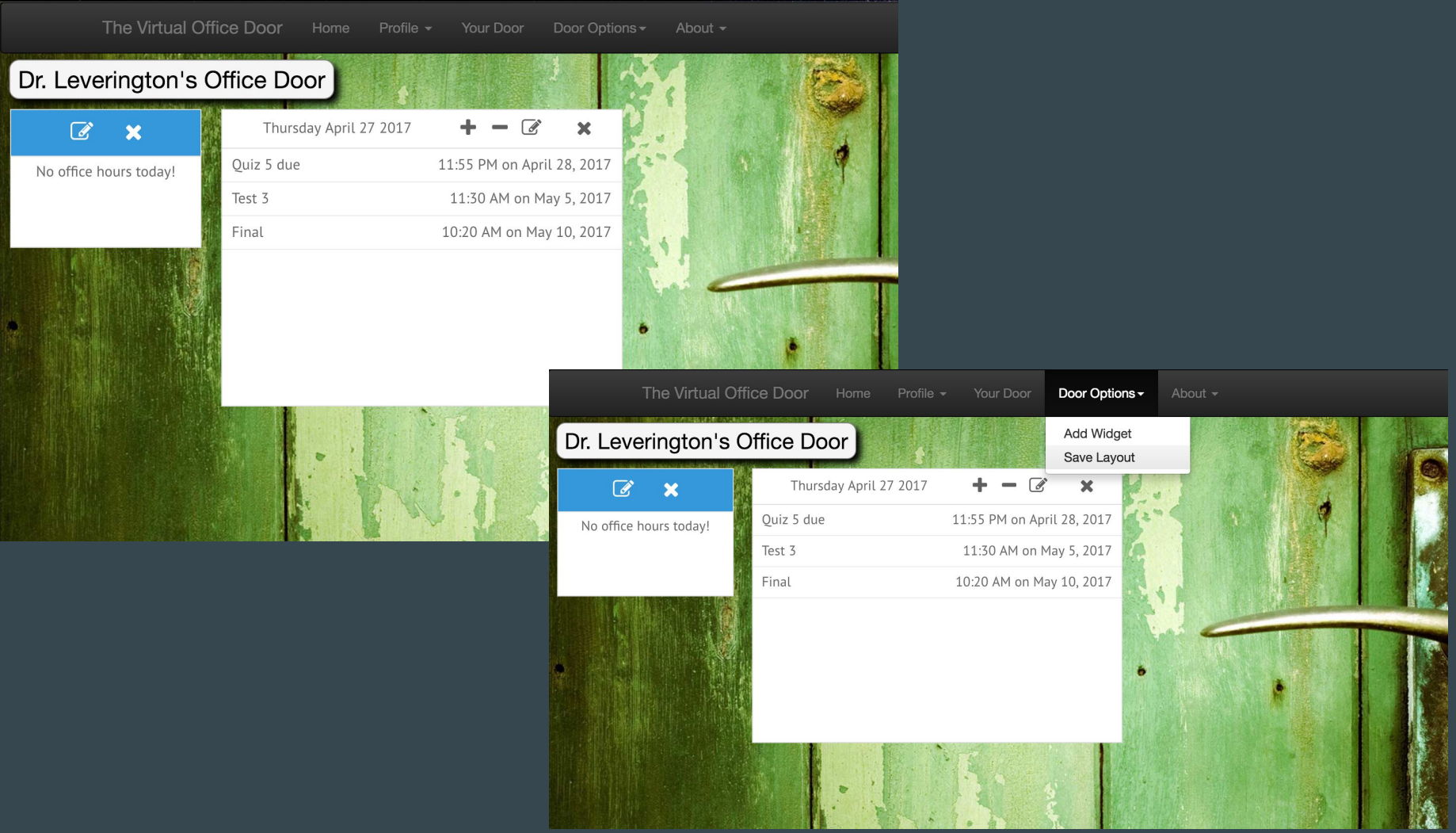
About
Dr. Leverington's Office Door
No office hours today!
Thursday April 27 2017


The Virtual Office Door
Home
Profile
Your Door
Door Options
About
Dr. Leverington's Office Door
No office hours today!
Thursday April 27 2017
Event: *
Quiz 5 due
Date: *
04/28/2017
Time: *
11:55 PM
Add Event


The Virtual Office Door
Home
Profile
Your Door
Door Options
About
Dr. Leverington's Office Door
No office hours today!
Thursday April 27 2017
Quiz 5 due
11:55 PM on April 28, 2017


The Virtual Office Door
Home
Profile
Your Door
Door Options
About
Dr. Leverington's Office Door
No office hours today!
Thursday April 27 2017
Quiz 5 due
11:55 PM on April 28, 2017
Test 3
11:30 AM on May 5, 2017
Final
10:20 AM on May 10, 2017
Add Widget
Save Layout

The Virtual Office Door | Home | Profile | Your Door | Door Options | About | Log out

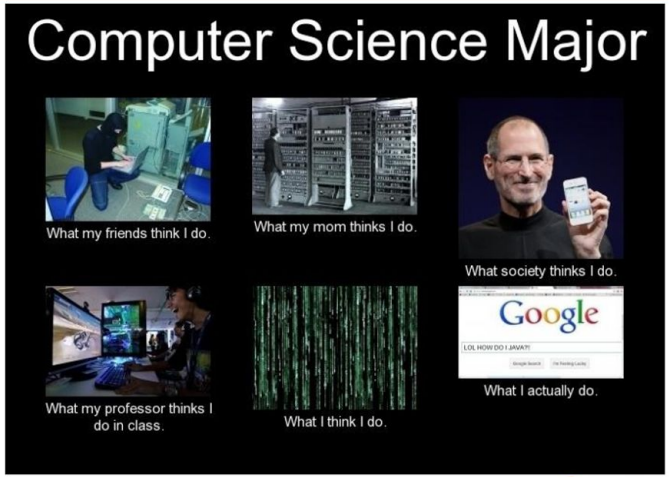
Dr. Leverington's Office Door

No office hours today!

Email:

Subscribe | Unsubscribe

Thursday April 27 2017	
Quiz 5 due	11:55 PM on April 28, 2017
Test 5	11:30 AM on May 5, 2017
Final	10:20 AM on May 10, 2017



The Virtual Office Door Home About Sign in with Google+

Dr. Leverington's Office Door

No office hours today!

Email:

Subscribe Unsubscribe

Thursday April 27 2017	
Quiz 5 due	11:55 PM on April 28, 2017
Test 5	11:30 AM on May 5, 2017
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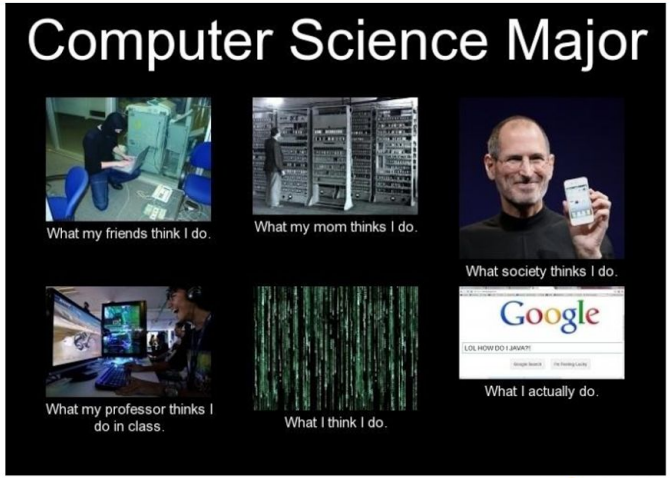


Implementation Overview

- Django Web Framework
  - Python 3.5
- Django REST framework
  - Allows communication through API calls regardless of the caller's state
  - Serializes and passes database information back and forth via GET and POST requests
- Javascript
  - jQuery
  - Webix
  - Gridstack
- Amazon Web Services
  - Free deployment options
- Google+ Login API
  - Secure 3rd-party account system

Presentation Layer

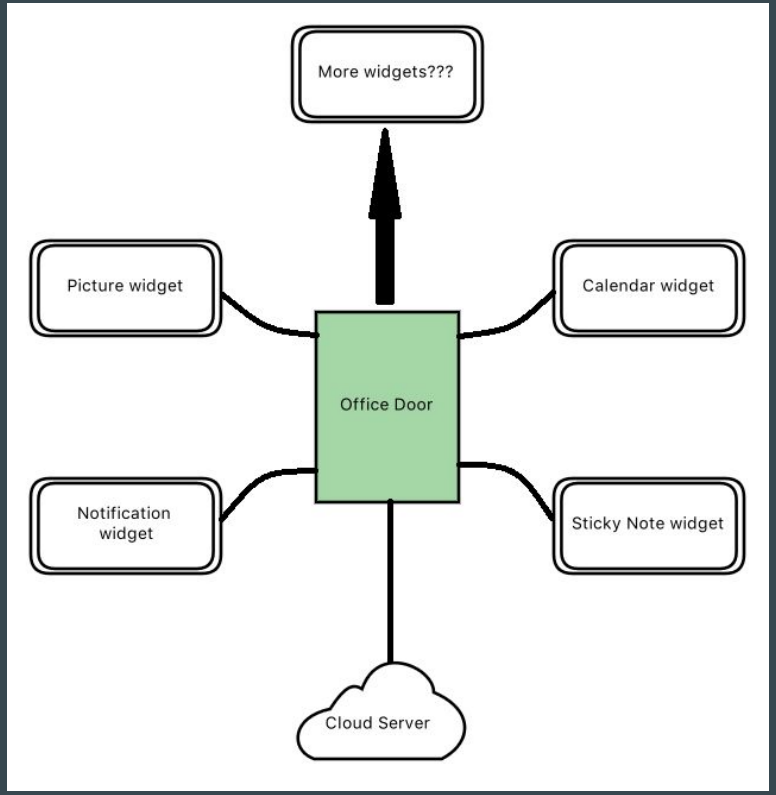
Frontpage/Google Login API:

- Easy to use Login system that integrates with current google accounts
  - NAU and many companies already use a google account for work or school reasons
- Clean design with the user being able to edit profile information on account creation
  - User might want displayed information to be different than their google account information
- Integration with database for profile storage and account security

Presentation Layer (cont.)

Virtual Office Door:

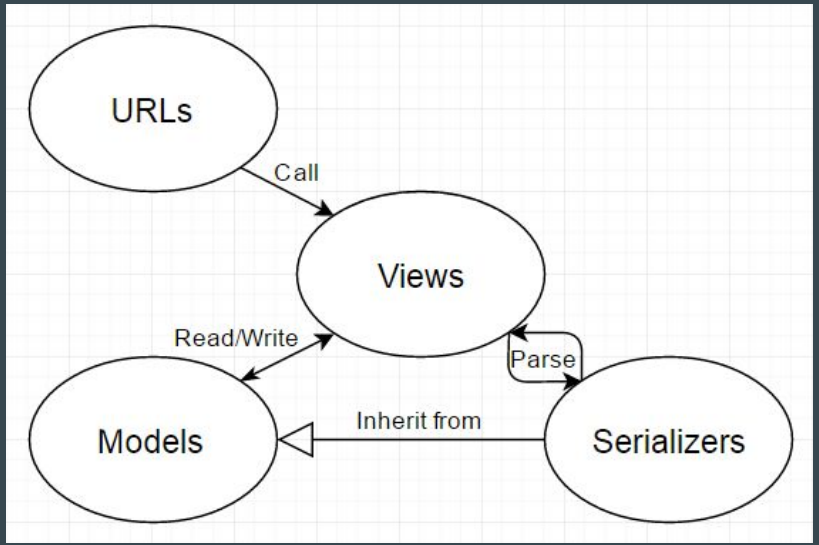
- 4 main sub-interfaces,
  the widgets.
  - Each widget interfaces with the other layers of the architecture in some way.
- This is the component that the user will interact with the most.



Application Layer

Four main components of our Django application:

- URLs
  - Specify which URLs call which views
  - Allow views to be called with parameters through URL patterns
- Views
  - Python functions that manage how requests are handled
- Serializers
  - Specify JSON format of a Model to serialize
- Models



Data Storage Layer

- Models
  - Serve as a template for the Database
  - Each Model class correlates to a table in a database
  - Each class variable correlates to a column in a table
- Sqlite3
  - Storing user information
  - Storing widget information
- Amazon Web Services
  - Deployment platform
  - Proof of hosting portability

Implementation Challenges

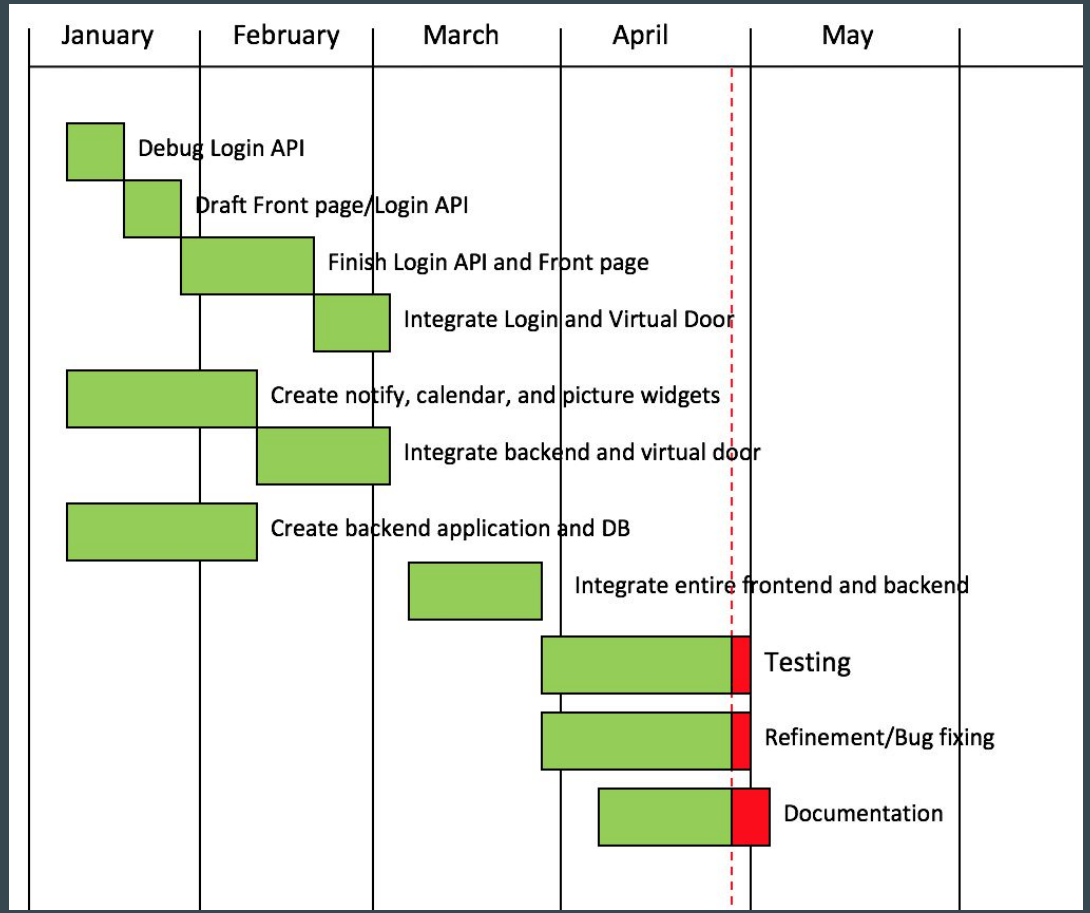
Challenge	Resolution
Email notification services cost money	Route through a centralized Gmail account
Different widgets made door layout modification not as straightforward as anticipated.	Utilized label Models for multi-record widgets.
Duplicate widget support would require reworking current design	Design idea saved for future updates (post capstone).

Fall Schedule

Completed Milestones:

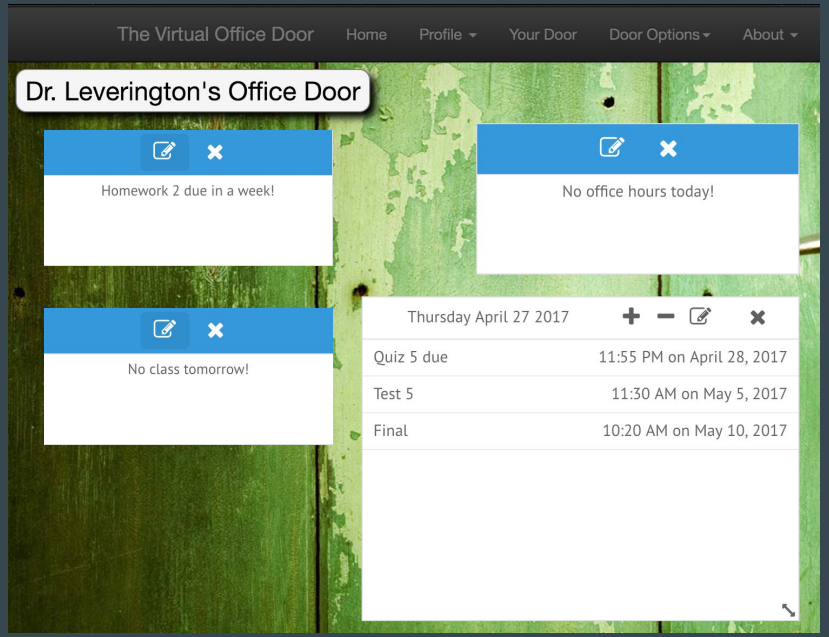
- Requirements Acquisition
- Feasibility Analysis
- Client Approved Requirements Document
- Pre-development Prototype

Spring Schedule



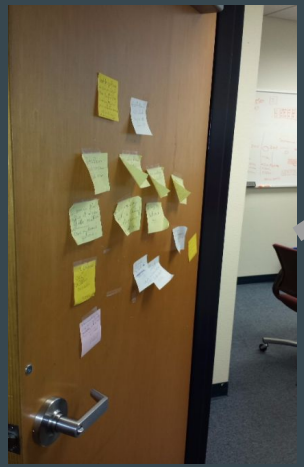
Future Work!

- Duplicate widget support
- Customizable email notifications
- Native (Android & iOS) mobile application
- Physical office door display
- Implement a door search feature
- Multiple door support



Conclusion

- Our Goal: To deliver a web application that allows for virtual office door communications between teachers and students, that could be expanded for use across different disciplines.
- Project Status
  - Requirements document satisfied
  - Working prototype
  - Resolving bugs



Questions?