

Brown Housing Review

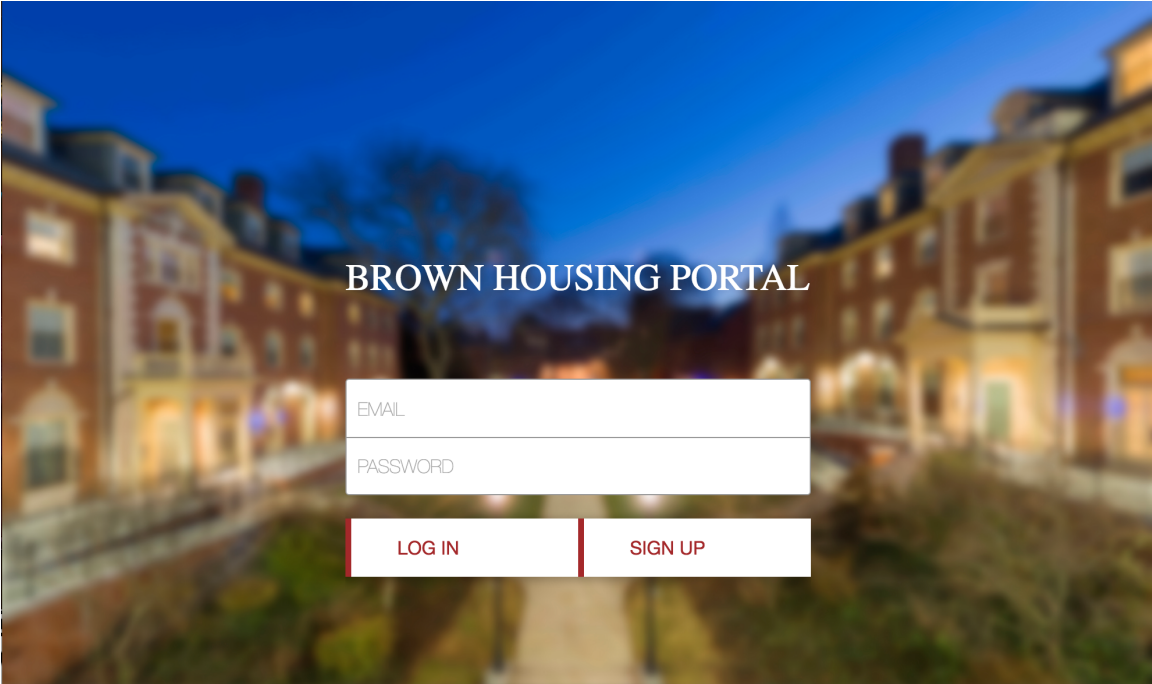
Jing Wang (jw12)

CS1320 with Professor Steve Reiss, teammates Ruixiang Li, Luyi Lu, Yutong Liao, Haoyun Zhou

This capstone project is my final project for CS132-Creating Modern Web App. The purpose of the project is to alleviate the stress in the current housing lottery process. Currently, it is really difficult for students to get dorm or floorplan information from the ResLife website. As a result, the only way for students to gain information about future dormitories is to ask upper class students. To solve this problem, we decide to build our own Brown housing portal that has an interactive map to show information of and to filter residency halls, interactive floorplans for each dorm showing facilities inside, a crowd-sourcing review system, and the save to favorite functionality.

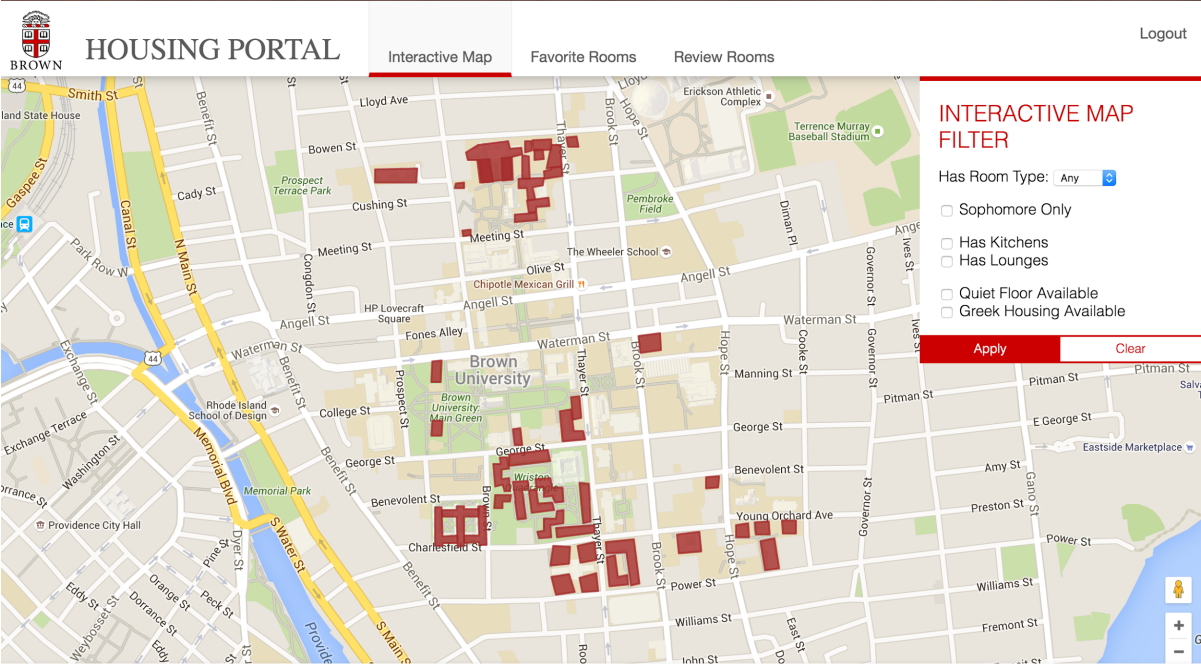
Our web application includes an authentication module. A user can sign up only with a Brown email. After entering all required information, a link will be sent to the email address to activate the account. To make sure this application is secure, we used the bcrypt library to encrypt the passwords, applied prepared statement to prevent SQL injection, and did session management for every request to prevent XSS attacks. After a user logs in, one is directed to the interactive map page, which highlights all the dorms on campus. One can interact with this map by hovering on any dorm to see its picture, availability of gender specific rooms and quite floors, number of kitchens and lounges, and number of all room types. One can also search for dorms by filling in the filter form to only highlight dorms that meet one's desire. This map uses Google Map API to locate Brown campus. We then got all the latitudes and longitudes of all points on each dorm to contour the shape of it and make it interactive. When clicking on a dorm, the user is redirected to its interactive floorplan page. One can also interact with the floorplan by hovering, clicking, or filtering the rooms. When a user clicks on a room, the room will be highlighted, and a list of information about this room and its reviews will be shown on the right panel. We implemented this interactive indoor mapping with image mapping, HTML canvas, and maphilight library to trace out every room on the chosen floor. If one likes the room, he or she can click on the star next to the room number on this page and add it to favorite, preparing for housing lottery. A user can always go back at any time and click on the "Favorite" tab to see all the saved rooms. Finally, we built a review system for users to rate the rooms. One can go to the "Reviews" tab to add, edit, or delete any of his or her reviews. After choosing the room to review and the time period one has lived there, a user can rate this room based on lighting, heating, furniture, street noise, and mechanical noise, as well as write text reviews. I hope this web application will help future students to browse information of every dorm and every room, shop rooms before housing lottery, and contribute to the source of information about housing options. It is a re-imagination of information acquirement and an experiment of streamlined user experience to replace the old housing lottery system.

Login Page:



CS1320 Group Project 2016 Spring

Interactive Map:



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Interactive Floorplan:



HOUSING PORTAL

[Interactive Map](#)[Favorite Rooms](#)[Review Rooms](#)[Logout](#)[Floor 8](#)

MINDEN HALL FILTER

Capacity [2](#)Gender [No Preference](#)

- ☐ Sophomore Only
- ☐ Suite
- ☐ Substance free
- ☐ Quiet

[Apply](#)[Clear](#)[Minden Hall 808](#)

- Single
- Located on quiet floor
- Gender Neutral
- Size: 240 sqft

[Review](#)[Cancel review](#)

Review Page:



HOUSING PORTAL

[Interactive Map](#)[Favorite Rooms](#)[Review Rooms](#)[Logout](#)

WRITE REVIEW

Minden Hall 101

LIGHTING ★★★★★
HEATING ★★★★★
FURNITURE ★★★★★
STREET NOISE ★★★★★
MECHANICAL NOISE ★★★★★

Minden Hall 808

LIGHTING ★★★★★
HEATING ★★★★★
FURNITURE ★★★★★
STREET NOISE ★★★★★
MECHANICAL NOISE ★★★★★

Minden Hall 113

LIGHTING ★★★★★
HEATING ★★★★★
FURNITURE ★★★★★
STREET NOISE ★★★★★
MECHANICAL NOISE ★★★★★

[Minden Hall](#)

101

LIVED DURING [2016 Spring](#)

RATING

LIGHTING ★★★★★
HEATING ★★★★★
FURNITURE ★★★★★
STREET NOISE ★★★★★
MECHANICAL NOISE ★★★★★

REVIEW

Having private bathroom is definitely a plus. Minden in general is great, but maybe not the first floor.

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