



# Online Housing Application

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This poster presents a web-application that we built for a course project in *User Interface* at Mount Holyoke College (MHC). Our idea was to implement a system to support the annual dorm choosing process at the college.

The current dorm and room assigning process is inefficient.



- Residential staff works 3 nights.
- Each night 500 students line up in a lecture hall.
- The process takes 4 hours each night.

We envision the possibility for students to register their dorm and room preferences from anywhere by creating an online application. Using JavaScript, our primary goal was to explore and enhance online map interface, which is one of the most interactive and popular visualization tools nowadays.



We also aim to promote computer science in our college community by using our knowledge to solve real community problems in a short amount of time.

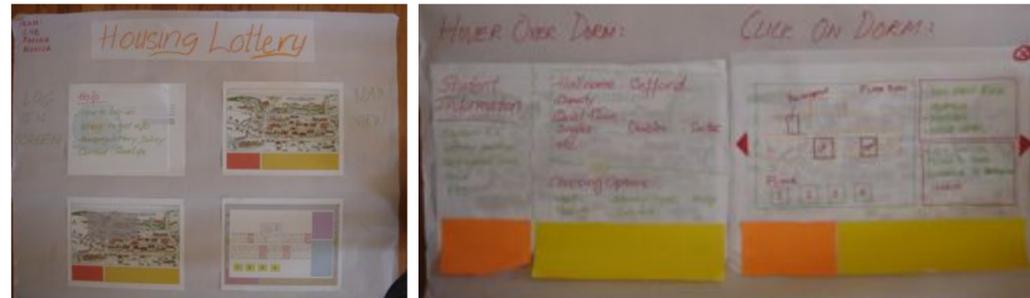


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Video:  
<http://cs.colgate.edu/~efourquet/nyc2015/housing/>

## DESIGN

We built a paper prototype to guide the design of our web-application.



## RESULTS

Our web-application is built around the following scenario:

- Each student is allotted a 5-min time window based on a lottery number.
- During that time, she signs in to explore all the dorms and rooms still available and makes a choice.

Outside the time window, students can follow the assigning process, view their status, explore all housing options and benefits via an interactive campus map, watch their favorite spots crossed off the list.

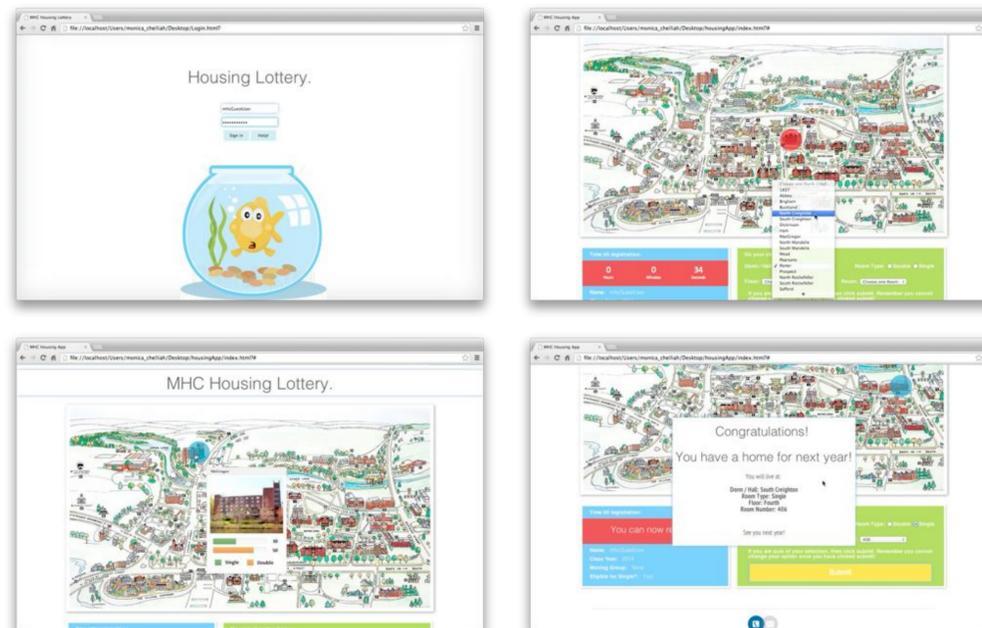


Fig. 1: Interactive map and panels to participate in housing assignment.

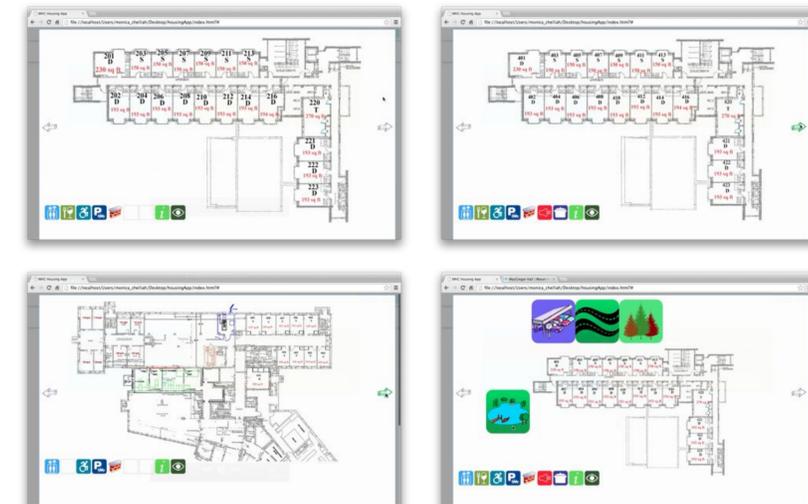


Fig. 2: Building floors with widgets for features and outside views.

## DISCUSSION

The team was inexperienced in both Google Web Toolkit (GWT) and JavaScript. Despite being written in Java, GWT's API turned out to be harder to use when it comes to web development, especially in designing and testing web layout.

We decomposed the application in three components.

1. Liye worked on the interactive map.
2. Monica worked on the lottery and preference panes.
3. Phuong worked on the floor maps.

The main lessons include the importance of reducing, i.e. prioritizing/narrowing down to essential tasks using user scenarios and the benefit to leverage from existing APIs.

## FUTURE WORK

- Build a database front-end so that updating buildings and maps is easy for the administration to manage.
- Run experiments to get feedback on user experience.
- Test the website in the wild: make sure it performs under expected load conditions.
- Work with Resident Life Office to deploy our system.
- Factor our code to help other MHC systems: meal system could reuse our interface and features, such as our database model, timing model, and/or UI template.