

Get Me a Room

A simple way to find and reserve study space on the UW campus

Vision

Students often want to find a quiet place to study with classmates and friends. It is frustrating when room after room is occupied by others and no vacant space can be found. Students are left wandering campus rather than using their time well. 'Get Me a Room' is a web application which will allow UW students to find available classrooms and study spots on campus. Libraries on campus provide a number of available study spots for students; however, these rooms are often full and students need alternative spaces. There is no other software that will allow students to find an open room when they need one; students are left to wander around campus searching for an open room. This software would allow students to save time and frustration by guiding students to find open rooms without having to check every other room in the building. There is currently no alternative for students to check available rooms and reserve them on the fly.

Software Architecture

The system requires a database of rooms and a front end component which will allow students to interface with the data. The most straightforward front end is a webpage. Both databases and webpages are well established and can be created with resources such as SQL and html.

The cornerstone of the project is the database storing room availability. Users will be able to both read which rooms are available and make reservations for rooms by interacting with a web page. The project should utilize the model-view-controller design pattern with the web page containing both controller and view components.

What makes this project interesting is how we must interact with preexisting UW room scheduling data and allow users to dynamically add and remove their own data from the database. We need to find a list of rooms and study spots for each building. Most of this information is available online on each building's webpage and only needs to be entered into the system once.

Once a list of rooms is compiled, we need to find a way to store each room's available times. To get the rooms' availability time, we will dynamically go through the University of Washington's time schedule of courses, and mark the rooms to be unavailable when classes are in session. We must also make updates to this schedule periodically as classrooms change and official room reservations are made.

On top of all the official data regarding room occupancy, users will be able to reserve space for themselves and free that space should they leave or determine that they no longer need it. The user should not, however, be able to alter the database in a way that would delete the official classroom reservations such that other users would falsely see that rooms are free.

All this information can be stored and handled using SQL to store room availability and Java, or some other language, to display the contents and modify the table as users interact with the feature's web page.

Challenges and Risks

The most serious challenge we see in developing this product is interfacing with the UW's official Classroom Support Services' room reservations. 'Get Me a Room' needs to reliably know when classrooms have courses being taught in them or are unavailable due to official reservations. If the development team cannot gain access through Classroom Support Services, 'Get Me a Room' will need to procedurally read from the registrar's course catalog (available online at MyUW) and determine when rooms are in use.

Additionally, this project relies heavily on maintaining a database and webpage. Teams should aim to have at least one member proficient with these technologies. The front end could be a phone app or webpage, though given the time constraints it may be more reasonable to simply prepare a webpage. Users would be able to access 'Get Me a Room' from their laptops, tablets, and smartphones using UW wifi.