



Room Usage App

USER GUIDE

VERSION 2.0.0

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Content

<i>Introduction and Purpose</i>	2
<i>App Features</i>	2
<i>Instructions for Use</i>	2-6
<i>Known Bugs or Limitations</i>	6

Introduction and Purpose

The Room Usage App is designed to track and compile usage statistics for rooms around Monash University. In an effort to become greener, Monash will use the data gathered by this app to reduce power wasted by lights, heating and cooling in rooms with few people in them. The app will allow users to fill in a form with details concerning the room utilisation, and automatically get their location. This user guide will cover how to effectively use each feature of this web application, and make users aware of any issues and limitations.

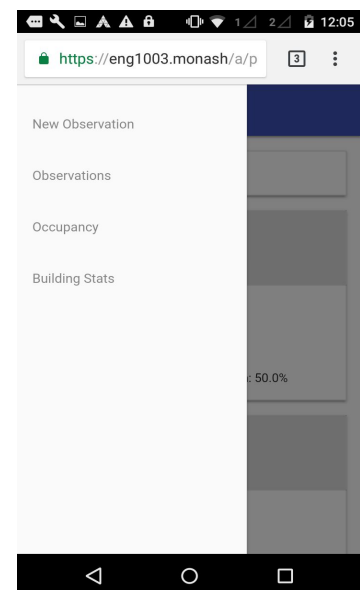
App Features

This app is designed to be run through the chrome web browser on an android device, but also works on iPhone through chrome. Upon opening the app, the 'new observation' page is displayed and allows for the recording of room usage fields. This page saves data entered by the user to the local storage, can automatically get the current address, and can be cleared by pressing a button. These recorded observations can be viewed as cards under the 'observations' page. The 'occupancy' page displays the observations that have the worst occupancy by hour. Useful statistics and data for each address are visible under the 'building stats' page.

Instructions for Use

Menu

The menu is able to be accessed by pressing the menu button on the top right of the screen. Tapping this will open a sidebar menu with 4 possible pages. Tapping one of the options will then open the page that holds the desired feature.



Menu options

New observation

To record a new observation, begin by entering the relevant information in the labelled text fields. Turn the switches off for lighting and heating/cooling if these appliances are turned off, otherwise leave them switched on. Instead of manually entering an address, the ‘automatically determine my address’ checkbox will automatically fill the building address text box with the user’s current location.

The clear button at the bottom of the page will clear all text fields and reset checkboxes and switches to their defaults. The save button will save all information recorded and reset text fields, allowing for a new observation to be made. If there are any issues with recorded values, the user will be informed in the message box at the bottom of the page.

The image displays three sequential screenshots of a mobile application interface for recording a new observation. Each screenshot shows a form titled 'New Room Observation' with a blue header bar. The form includes the following elements:

- Building address...**: A text input field.
- ☐ **Automatically determine my address**: A checkbox.
- Room number**: A text input field.
- Lights**: A toggle switch (currently on).
- Heating / cooling**: A toggle switch (currently on).
- Number of seats in use**: A text input field.
- Number of available seats**: A text input field.
- SAVE** and **CLEAR** buttons: Located at the bottom right of the form.

The first screenshot shows the form with all fields empty. The second screenshot shows the form with the 'Number of seats in use' field containing the value 'H'. The third screenshot shows the form with the 'Number of seats in use' field containing the value '2', which has triggered an error message: 'Input is not a number!' and 'Error: enter valid number of seats in use'.

Text fields

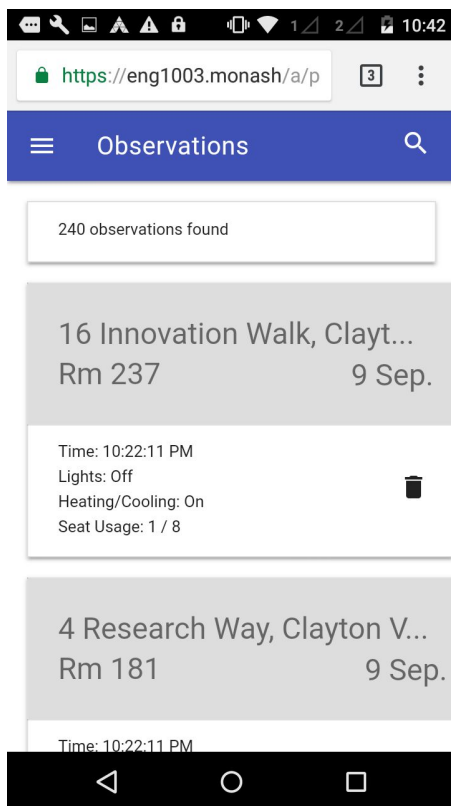
Clear and save buttons

Error messages

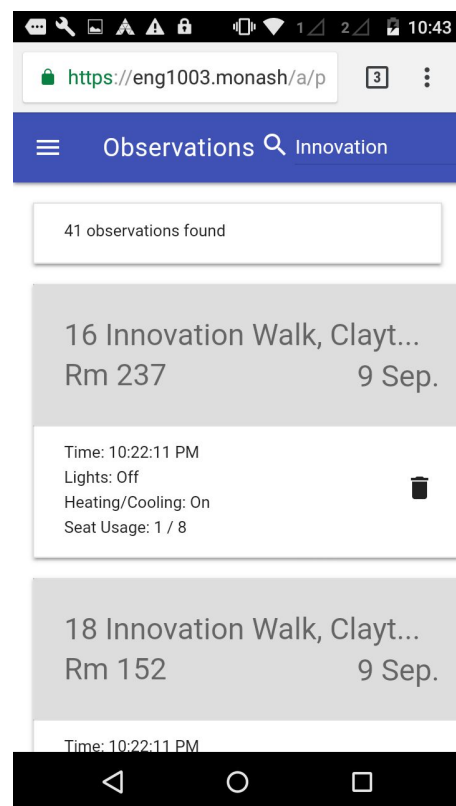
Observations

All recorded observations will be saved under the ‘observations’ page. This page displays all saved data in cards, as well as how many observations have been recorded. Displayed data includes the address, room number, lights, heating/cooling, seats used and time recorded. The cards are automatically arranged from newest to oldest, based on the time of submission. The bin button on each card will delete the corresponding card.

Tapping the search button will open a search bar. Text entered into the search bar will display cards that have corresponding room numbers or addresses. This will update as text is entered.



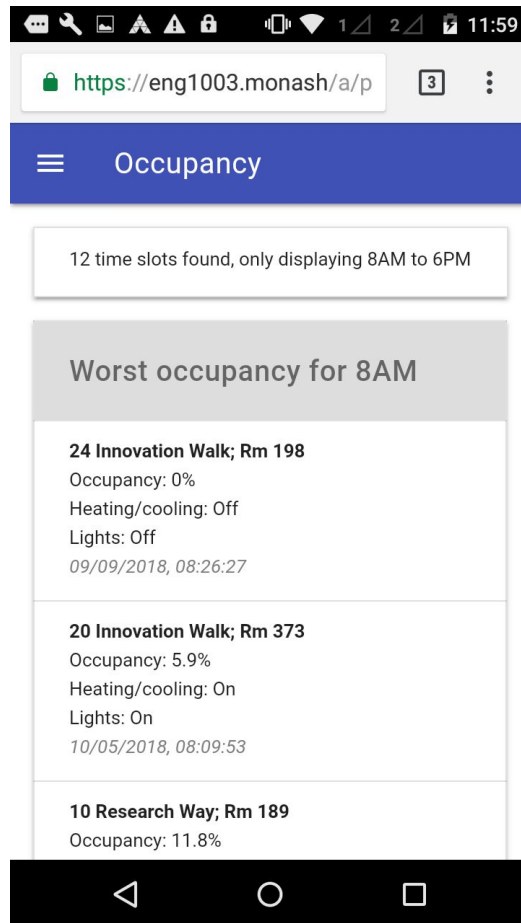
Cards being displayed



Search function displaying cards

Occupancy

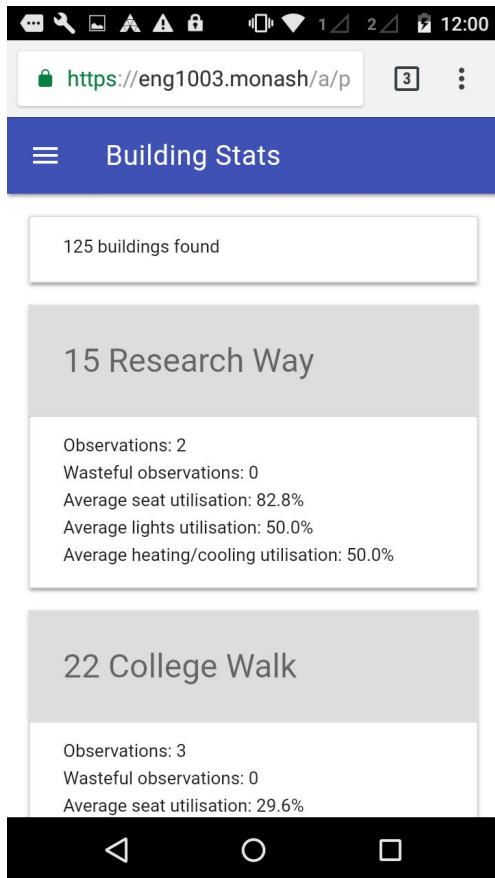
The occupancy page displays the five worst room observations by occupancy for each hour between 8am and 6pm. These will be based on previous observations that have been stored on the device. No interaction is available on this page.



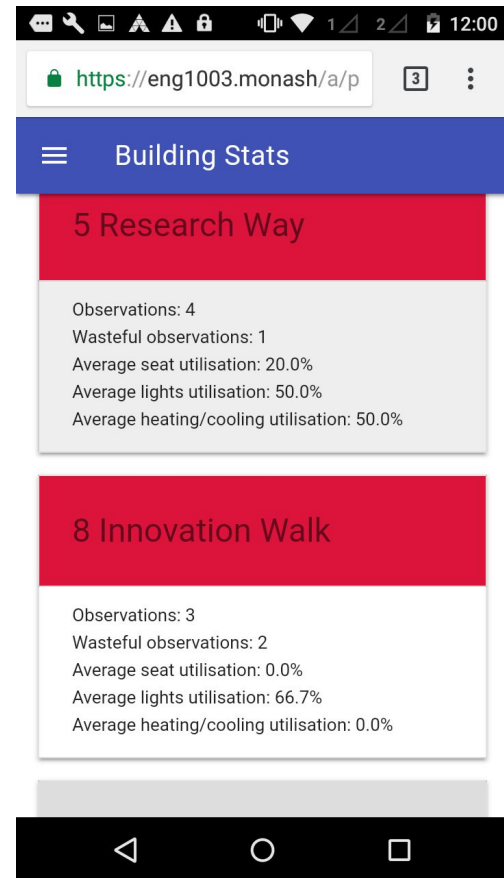
Occupancy page

Building stats

The building stats page has information for each address. This includes the number of observations, wasteful observations, and averages for different types of data. This page is similar to the occupancy page as it is also based on observations recorded on the device and has no user interaction. Buildings with at least one wasteful observation will be highlighted in red.



Building Stats page



Wasteful buildings being highlighted

Known Bugs or Limitations

While the app is fully functional, there are a number of limitations and improvements that can be made. The web app will work on laptop and desktop computers, but the automatic location feature may not work as intended. The look of the web app may also look different if run on a device other than a mobile phone. The app is only able to be run if the device is connected to the internet. An observation can only be made for areas that have a room number. Because of this, many areas that waste power will not be taken into consideration. There are also other consumptions of power that cannot be recorded, as only lights and heating/cooling can be observed. The location accuracy could be improved to more accurately find the user's location.