Freedge Tracker
User Documentation

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1. Introduction

The Freedge Tracker is a managerial tool intended for use by Freedge administrators. The primary goal of the Freedge Tracker is to provide an interface for Freedge administrators to use to track information, such as the location, contact information, and activity status, for each freedge registered in their records. The Freedge Tracker also allows Freedge administrators to communicate with freedge caretakers regarding the activity status of their freedge through a notification system.

The Freedge Tracker was developed at the University of Oregon by a team of Computer Information Science students. The current version of the Freedge Tracker serves as a prototype of the system. As it currently functions, the Freedge Tracker does not have the full ability to send SMS messages or email messages to other devices. The Freedge Tracker does have notification functionality that sends internal messages to the same device running the system for feedback.

This user manual explains the major functionality of Freedge Tracker features. The data used in this manual is from test data created by the developers. This test data can be found in the system's test_data folder.

2. Installation and Set-up

Complete the following steps in order to correctly install and set-up the Freedge Tracker system:

1) Navigate to the Freedge Tracker github repository:
   https://github.com/kalyn-k/Freedge-Tracker

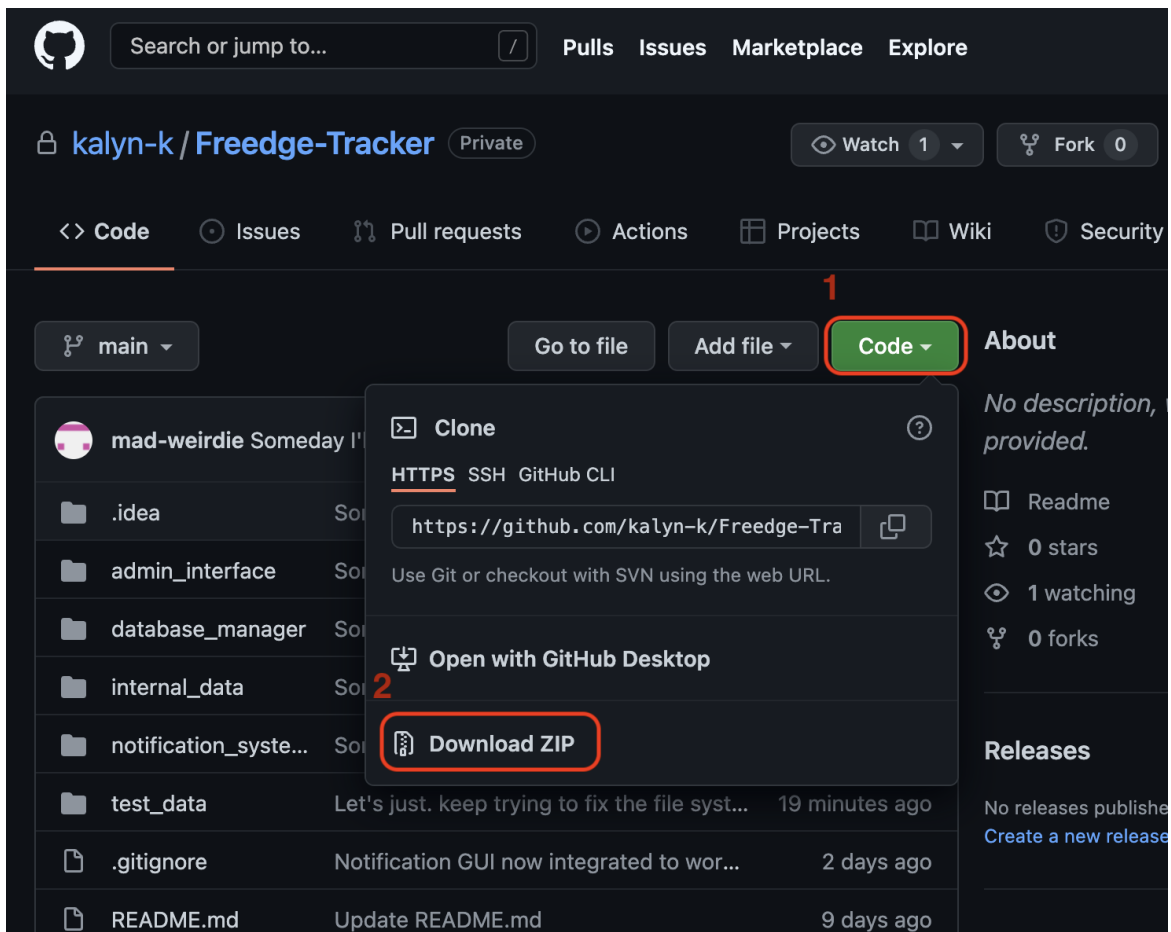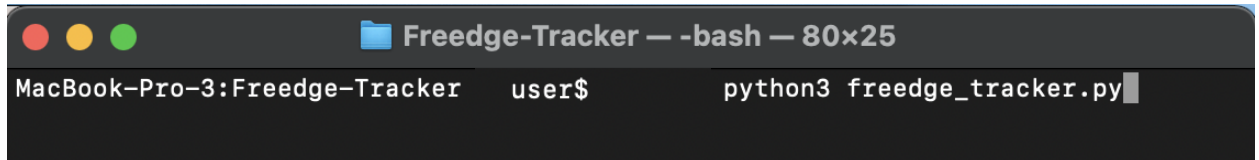2) Download the ZIP file of the Freedge Tracker source code.

Figure 1

3) Move the zipped file from your Downloads folder to where you desire to keep the Freedge Tracker on your device.

4) Unzip the file by double clicking or right clicking on the file.

5) To run the Freedge Tracker, open your terminal. Navigate to the folder you have saved the Freedge Tracker source code in by typing the command: "cd ./*your file path*/Freedge-Tracker". Hit enter.

6) Once you are in the Freedge-Tracker folder in the terminal, you are able to run the software. To do this, type the following command into the terminal and hit enter: "python3 freedge_tracker.py".

Figure 2

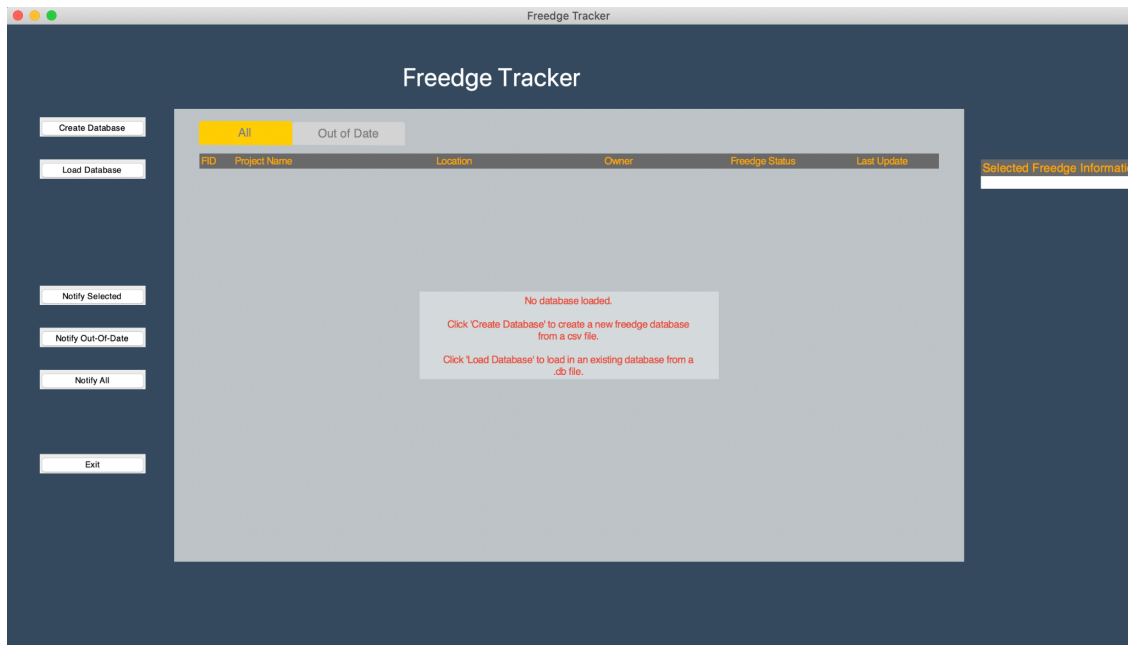The window shown below will appear.

Figure 3

7) Now, you may upload your data and start using the Freedge Tracker!

3. System Features

3.1 Create Database

Creating a new database is the first step for a first-time user. When the user selects the "Create Database" button from the menu, the following window will be displayed:
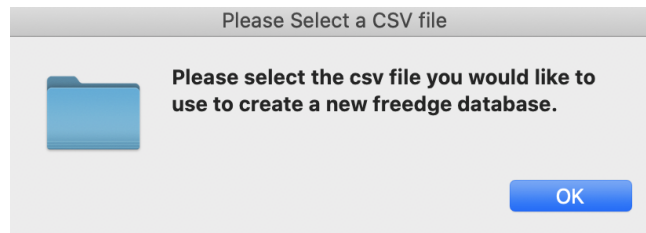
Figure 4

By selecting "OK", the user will be able to choose from their finder window which .csv file they would like to upload. The database is created by the system once you upload your desired .csv file. This file should include information for all of the registered freedges you wish to include–ideally all of the currently active freedges according to your records. You are able to upload a new file and create a new database whenever you please. After a csv file has been selected, the user will have the option to choose where they would like to save their database file on their computer.
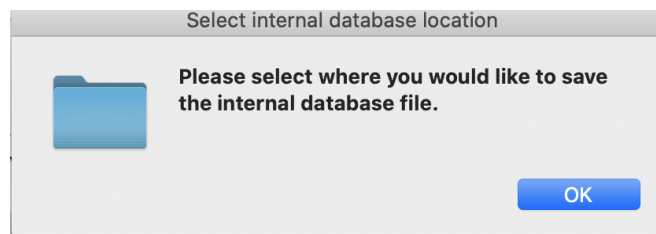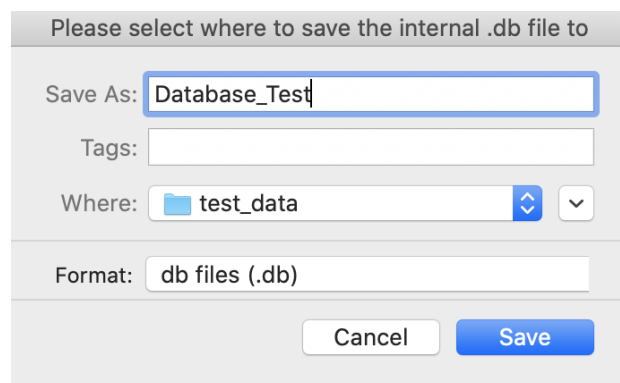

Figure 5

Figure 6

After the user chooses where they would like to save their database file, the main menu window updates to display all of the freedges and their data from the uploaded .csv file.
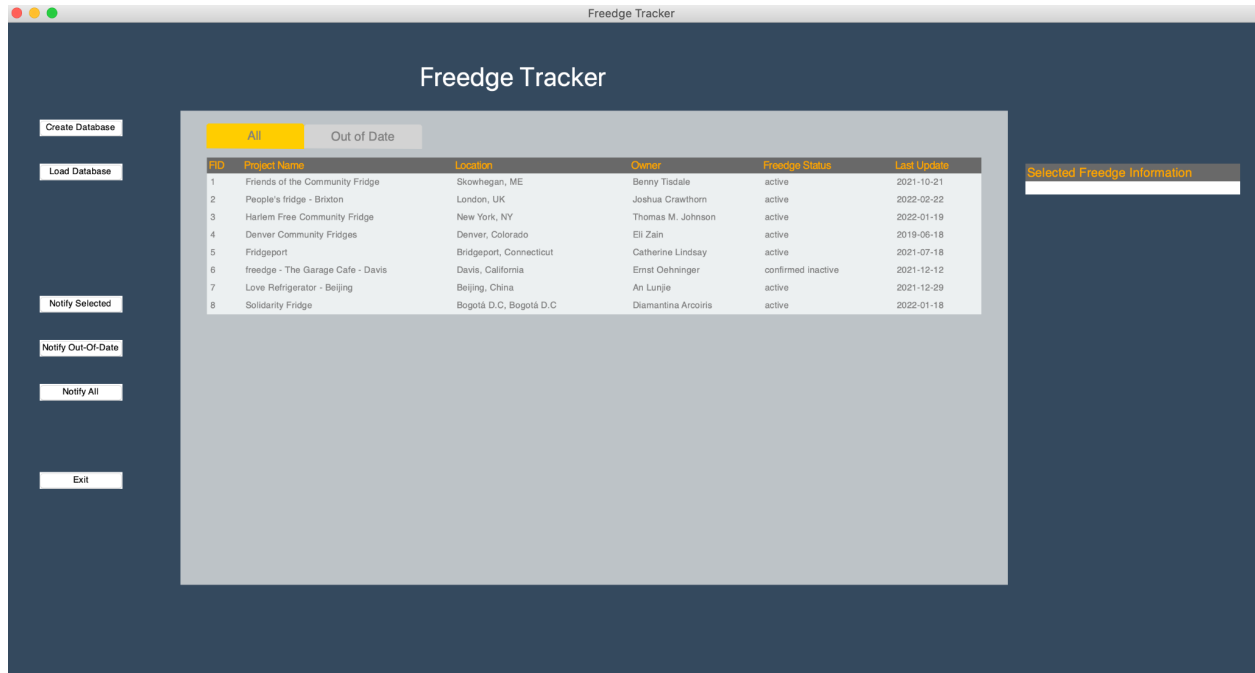
Figure 7

Once the data is loaded onto the system, the user has the option to view all of the freedges uploaded, or they can view only the freedges that are considered to be out-of-date. A freedge that is out-of-data is one whose status has not been updated within the past 90 days.
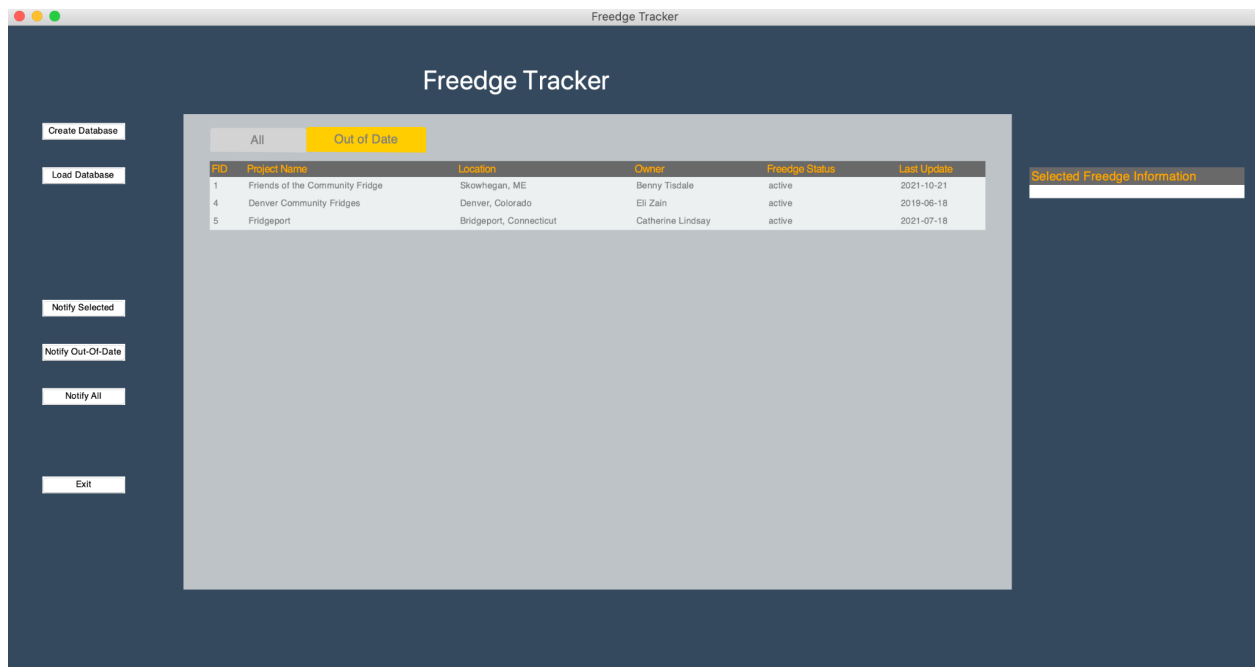
Figure 8

It is important to note that if the user uploads a .csv file that is not of the correct format, the system will allow the user to select the .csv file, but the contents will not be displayed on the main window. The system works on the assumption that the uploaded .csv file has first been reviewed by a Freedge administrator and manually checked for validity. The .csv file should be formatted with information that includes: <project_name> <network_name> <street_address> <city> <state/province> <zip_code> <country> <date_installed> <contact_name> <phone_number> <email_address> <permission_to_contact> <preferred_contact_method> <activity_status>. The headers of this file are expected to correspond to the titles defined in the source code's freedge_constants.py file:

```python
PROJECT_NAME_KEY = "Project"
NETWORK_NAME_KEY = "Network"

STREET_ADDRESS_KEY = "Street address"
CITY_KEY = "City"
STATE_PROVINCE_KEY = "State / Province"
ZIP_CODE_KEY = "Zip Code"
COUNTRY_KEY = "Country"

DATE_INSTALLED_KEY = "Date Installed"

CONTACT_NAME_KEY = "Contact Name"
PHONE_NUMBER_KEY = "Phone Number"
EMAIL_ADDRESS_KEY = 'Email Address'

PERMISSION_TO_CONTACT_KEY = "Permission to Contact"
PREFERRED_METHOD_KEY = "Preferred Contact Method"

ACTIVE_STATUS_KEY = "Active?"
```

Figure 9

3.2 Load Database

Loading a database provides the user with the option to upload an already existing database in a .db file format. Upon selecting this option, the following window will appear:
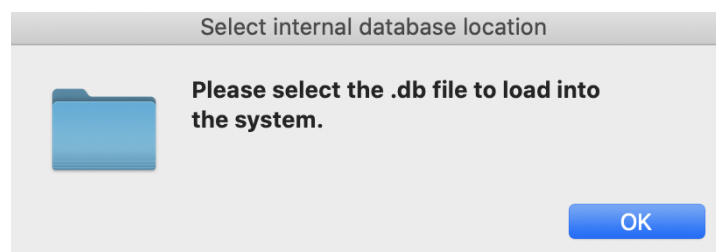

Figure 10

The system will prompt for the user to upload a .db file. Note that the user will not be able to select any file that is not a .db file. Once this file is uploaded, the contents will appear on the main menu as it does in figure 7. The system will recognize if a database was created or used in its previous use and ask the user if they would like to use the same database as before:
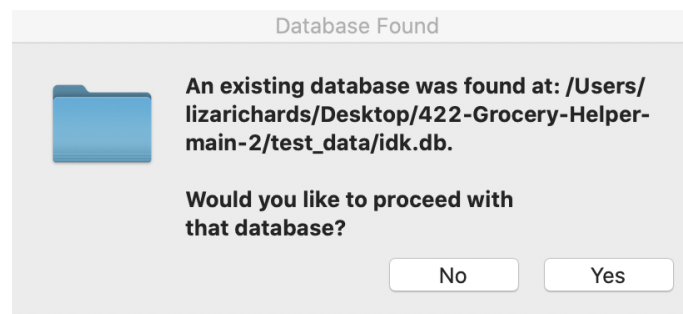

Figure 11

3.3 Select a Freedge

When the user has uploaded a database, they have the option to select a freedge from the list displayed on the main menu. When a freedge is selected, the row will highlight and all of the relevant information pertaining to the selected freedge will be shown in a box on the right side of the window, labeled "Selected Freedge Information."
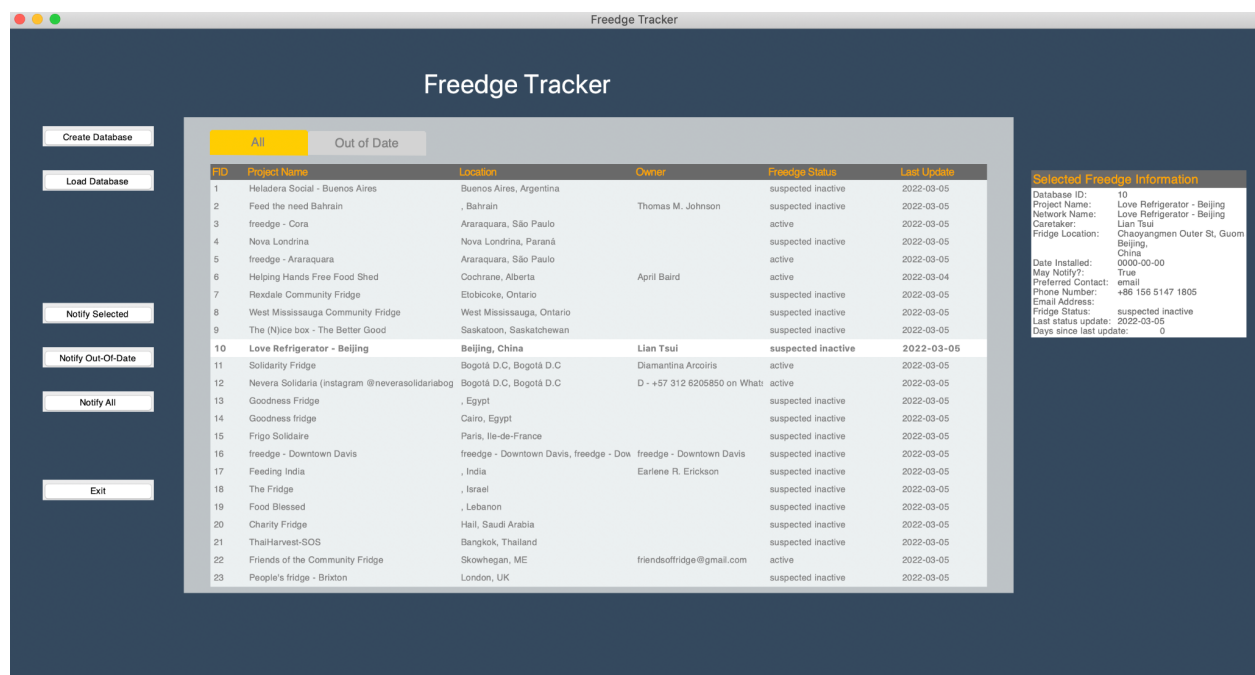

Figure 12

7

3.4 Notify Selected Freedge

When the user has selected a particular freedge from the list of freedges, they can choose to send a notification to this freedge. Once you have highlighted your desired freedge, click the "Notify Selected" button. The pop-up window below will display for the user to confirm whether or not they want to send a notification to the selected freedge's caretaker.
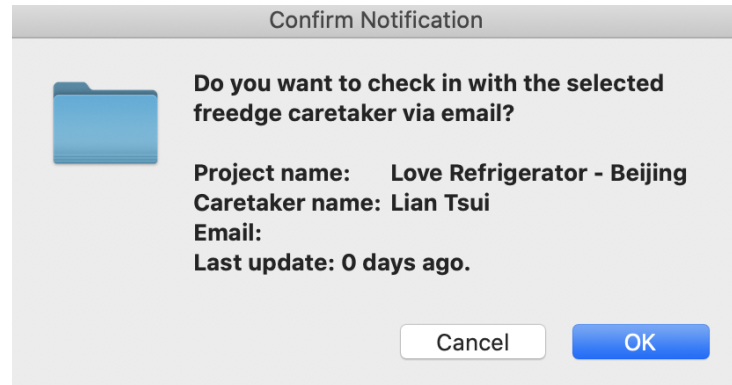
Figure 13

After choosing okay, the window below will display. This window will contain a personalized message indicating that the Freedge Organization would like to ask what the activity status of the caretaker's freedge is. The caretaker will have the option to choose between "Still active" or "No longer active." After choosing one of these options, the user must select the "Send Reply" button, and this pop-up window will disappear. The status of the freedge will be updated, and the user will see the full main menu window again.

Figure 14

Note that in the below image, the status of Lian Tsui's freedge changed from "suspected inactive" to "active."

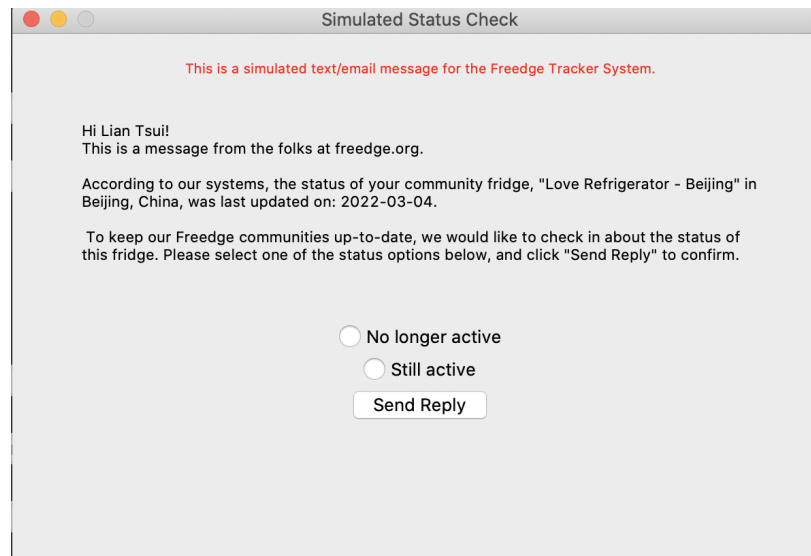| FID	Project Name	Location	Owner	Freedge Status	Last Update
1	Heladera Social - Buenos Aires	Buenos Aires, Argentina		suspected inactive	2022-03-05
2	Feed the need Bahrain	, Bahrain	Thomas M. Johnson	suspected inactive	2022-03-05
3	freedge - Cora	Araraquara, São Paulo		active	2022-03-05
4	Nova Londrina	Nova Londrina, Paraná		suspected inactive	2022-03-05
5	freedge - Araraquara	Araraquara, São Paulo		active	2022-03-05
6	Helping Hands Free Food Shed	Cochrane, Alberta	April Baird	active	2022-03-04
7	Rexdale Community Fridge	Etobicoke, Ontario		suspected inactive	2022-03-05
8	West Mississauga Community Fridge	West Mississauga, Ontario		suspected inactive	2022-03-05
9	The (N)ice box - The Better Good	Saskatoon, Saskatchewan		suspected inactive	2022-03-05
10	Love Refrigerator - Beijing	Beijing, China	Lian Tsui	active	2022-03-04
11	Solidarity Fridge	Bogotá D.C, Bogotá D.C	Diamantina Arcoiris	active	2022-03-05
12	Nevera Solidaria (instagram @neverasolidariabog	Bogotá D.C, Bogotá D.C	D - +57 312 6205850 on Whats	active	2022-03-05
13	Goodness Fridge	, Egypt		suspected inactive	2022-03-05
14	Goodness fridge	Cairo, Egypt		suspected inactive	2022-03-05

Selected Freedge Information

Database ID:	10
Project Name:	Love Refrigerator - Beijing
Network Name:	Love Refrigerator - Beijing
Caretaker:	Lian Tsui
Fridge Location:	Chaoyangmen Outer St, Guom Beijing, China
Date Installed:	0000-00-00
May Notify?:	True
Preferred Contact:	email
Phone Number:	+86 156 5147 1805
Email Address:	
Fridge Status:	active
Last status update:	2022-03-04
Days since last update:	0

Figure 15

It is important to note that if the caretaker of the selected freedge chose to not be notified by the system, the following warning will be displayed to the administrator after clicking the "Notify Selected" button.

Permission Denied

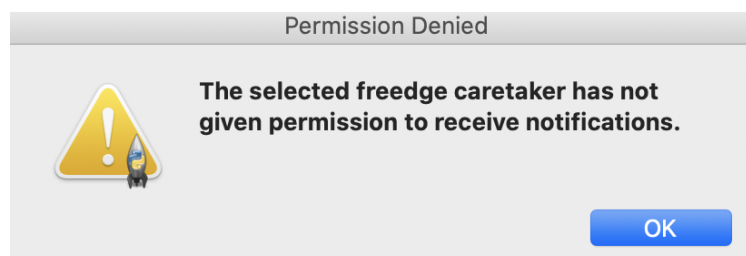The selected freedge caretaker has not given permission to receive notifications.

OK

Figure 16

To check if a freedge has given permission to be notified, select the desired fridge and view the tab on the right labeled "Selected Freedge Information." If the caretaker has given permission, then "May Notify" will be labeled as "True", otherwise it will be "False."

Selected Freedge Information

Database ID:	4
Project Name:	Denver Community Fridges
Network Name:	Denver Community Fridges
Caretaker:	Eli Zain
Fridge Location:	321 East 45th Avenue Denver, Colorado, 80216 United States
Date Installed:	2021-03-21
May Notify?:	False
Preferred Contact:	
Phone Number:	+1 505-859-9381
Email Address:	
Fridge Status:	active
Last status update:	2019-06-18
Days since last update:	991

Figure 17

3.5 Notify "Out-of-Date" Freedges

If the user desires to send a notification to all freedges that are out-of-date, they can select the "Notify Out-Of-Date" button on the user menu.

When the user chooses to send a notification to all the freedges that are considered to be out-of-date, the following window will display a list of all out-of-date freedges and their information.
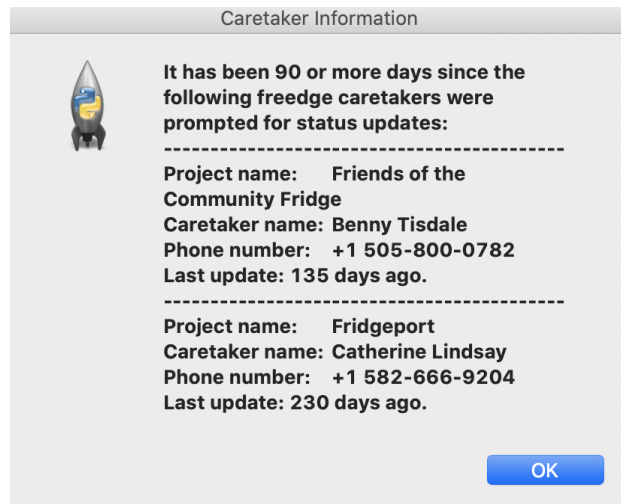

Figure 18

Once the user selects "OK" to confirm that they want to proceed with this action, the next window will appear to confirm that the user wishes to notify the selected caretakers.
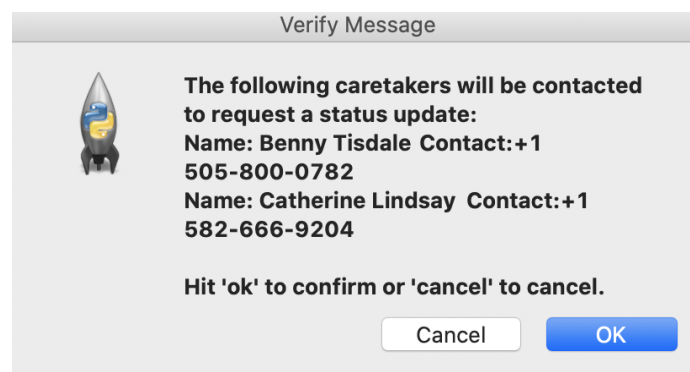

Figure 19

Once all of the out-of-date freedges have been updated with regards to their status, the "Out-Of-Date" window should be empty, with the exception of any freedges that do not give permission to be contacted (see figure 21). If the user tries again to select the "Notify

Out-Of-Date" button, the following window will appear to notify the user that all of the freedge statuses in the database have been updated.
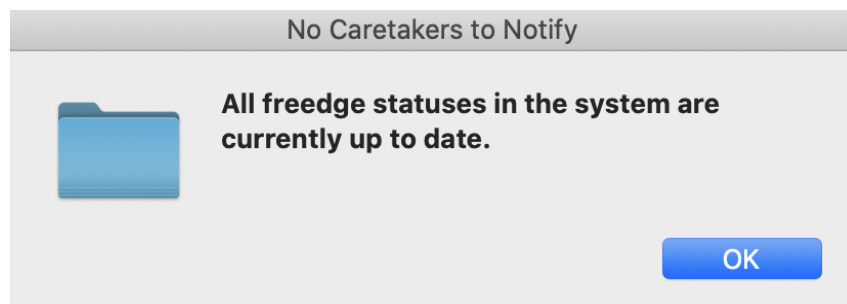

Figure 20

Note that in the image below, the "Selected Freedge Information" tab on the right shows the administrator that for this selected freedge, "May Notify" is marked as False. This means that no notifications will be sent to this caretaker, and their freedge will remain in the Out-Of-Date tab until the caretaker updates their freedge's status in the .csv file themselves.

Figure 21

3.6 Exit

When the user is done using the system, they can select the "Exit" button from the menu. This will completely exit the program and stop the system from running.

3.7 Testing the System

Users are able to generate a test database and upload it to the Freedge Tracker for the purposes of testing the system or getting familiar with using the system.

To generate a complete set of test data, which includes both up-to-date and out-of-date freedge entries, first the user must open their terminal and navigate to the Freedge-Tracker folder by entering the command "cd ./*your file path*/Freedge-Tracker " and hitting enter.

Within this folder, run the command "python3 database_simulator.py" in the terminal. This runs code that will generate a testing database titled "fdb_needs_updating.db" which will be saved inside the test_data folder. After running the database simulator program, the user is ready to load the "fdb_needs_updating.db" file into the Freedge Tracker and test or learn how to use the system.

The "fdb_needs_updating.db" file is updated as the user makes changes to the data within the system. The user has two choices regarding this test data the next time they use the system: (1) they can reupload "fdb_needs_updating.db" to the system and continue altering their modified test data, or (2) they can rerun "python3 database_simulator.py" in the terminal, which will overwrite "fdb_needs_updating.db" with new, different test data, and upload that testing database to the system.

3.8 Updating the Constants File

The freedge_constants.py file can be found in the Freedge Tracker source code within a folder titled InternalData.
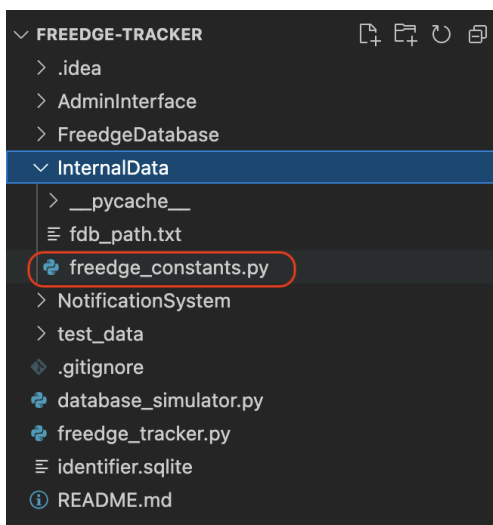

Figure 22

This file sets values for elements that control things such as the titles to rows expected from the input .csv file and the number of days to wait before updating a particular freedge's status to "suspected inactive" in the database. Currently, these constants are set at default values. However, Freedge administrators may wish to change these constants. For instance, if the .csv header format used by Freedge for collecting freedge data calls these headers by different names, users may update the constants in the system to reflect what is used by their .csv file. Note that it

is important no constant is left empty in the freedge_constants.py file, as this will cause errors in the system.

Note: It is important that no other files in the source code are altered by individuals without proper experience working with software. Altering the source code may cause unexpected system errors. If you experience new system errors or failures that appear to be coming from within the source code and not user-error (i.e., uploading an invalid file), remove the Freedge Tracker folder from your device and revisit the Installation and Set-up steps of this manual.