

# MOUSER

OPEN  
SOURCE  
WITH SLU.

Mouser is a desktop app designed to optimize research that uses animal experimentation. Animals are often used in experiments to analyze the effects of drugs and other products, and Mouser is a way to optimize this analysis. Mouser will allow researchers to manage their own scientific experiments, where they can enter animal measurements, configure experiment information, and control which users can access the experiment. Using Mouser, animals can be measured in any way based on the user's specifications, like weight or blood pressure, and this data can be managed easily with the application.



*This application was requested by Dr. Karoly Toth, Research Professor at Saint Louis University. The application is meant for SLU researchers but can be expanded to work for other organizations/research projects.*

- Integrated with RFID for automatic data input
- Sound confirmation minimizing time spent at the computer while in the laboratory
- User Admin has the ability to assign roles to other users and restrict certain use cases
  - Automatic group configuration based on weight

## Source Code



Uday Prasad Aitha  
(Team Lead)



## Developers (GitHub)

Logan Wyas



Cori Diaz



Tyler Bush



The experiment menu lists each experiment the user has access, and allows certain users to create a new experiment.

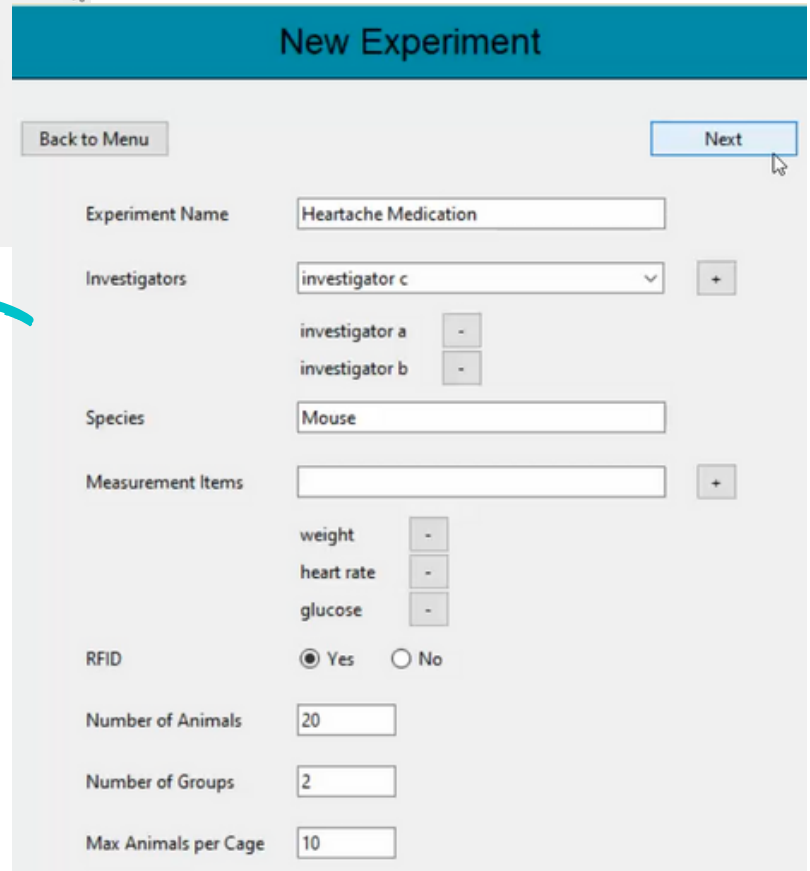


**Experiments**

Back to Menu Create New Experiment

Name	Date Created
Flu Vaccine	2022-12-01
Cancer Drug	2022-12-01

The Create New Experiment button will take the user to an input page to customize the experiment's data.



**New Experiment**

Back to Menu Next

Experiment Name: Heartache Medication

Investigators: investigator c +

investigator a -

investigator b -

Species: Mouse

Measurement Items: +

weight -

heart rate -

glucose -

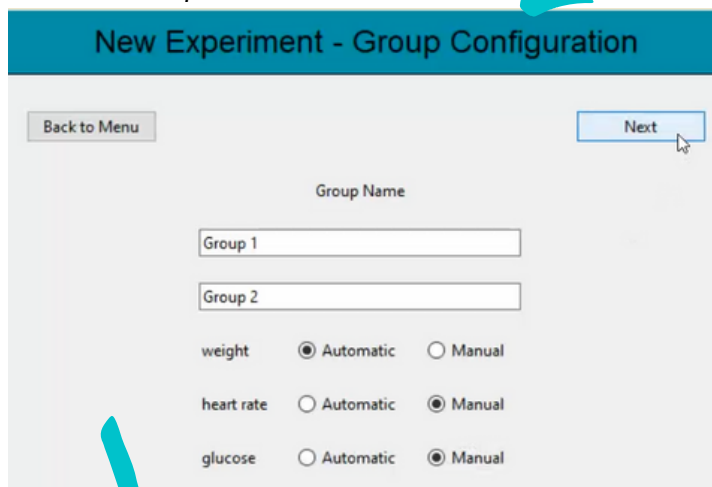
RFID: ☒ Yes ☐ No

Number of Animals: 20

Number of Groups: 2

Max Animals per Cage: 10

The user will then configure how the animal groups will be organized within the experiment.



**New Experiment - Group Configuration**

Back to Menu Next

Group Name

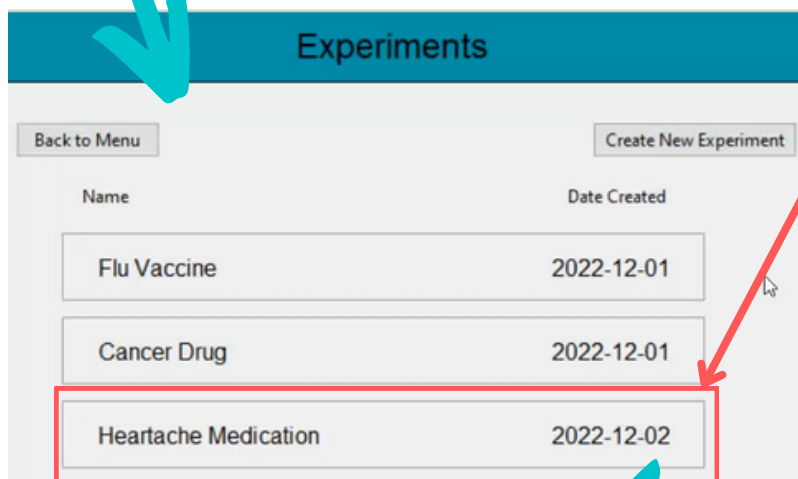
Group 1

Group 2

weight: ☒ Automatic ☐ Manual

heart rate: ☐ Automatic ☒ Manual

glucose: ☐ Automatic ☒ Manual



**Experiments**

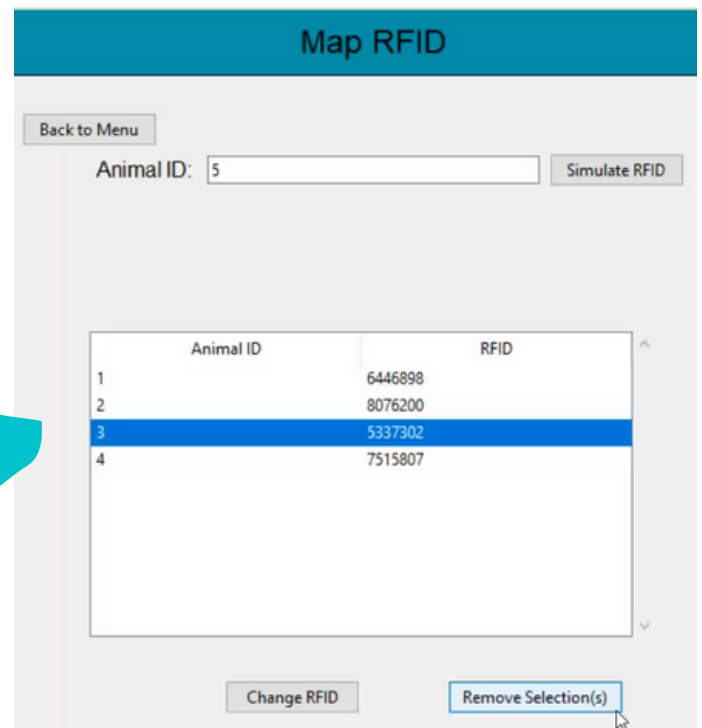
Back to Menu Create New Experiment

Name	Date Created
Flu Vaccine	2022-12-01
Cancer Drug	2022-12-01
Heartache Medication	2022-12-02

Upon completion, the newly-created experiment will be displayed and become available for selection in the experiment menu.

After experiment creation, the user can start working on things like data collection, mapping RFID, and data analysis.

The Map RFID page (as shown right) is used to enter each animal into the experiment. If the RFID is enabled for the experiment, the user can use barcodes or chips associated with each animal for easy data entry.



**Map RFID**

Back to Menu

Animal ID: 5 Simulate RFID

Animal ID	RFID
1	6446898
2	8076200
3	5337302
4	7515807

Change RFID Remove Selection(s)