User Needs Survey

Senior Design BIM110A Team 1

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**Part 1: Introductory Questions**

Our group will be conducting a senior design project on creating a digital lock system in order to ensure that refrigerators in the lab are secured. Occasionally in labs, the refrigerator accidentally gets left open, and the consequences can be devastating since open refrigerators can compromise hundreds of thousands of dollars in research. To help prevent this, our group will create a lock that is connected to an app so the lock can secure the refrigerator from being left ajar or slipping open, as well as being able to limit access to selected personnel.

The main information that will be needed for this project are the current issues with locking systems for lab refrigerators and ways that users wish to use the device digitally. We also need other information about possible features that, while not necessary, may be wanted by enough people.

This survey is designed to gather information about needs and wants important to potential end users of our product.

What is your name and email?

Does your lab use locks or any securing mechanism to make sure the refrigerators stay closed?

* Yes
* No

If you answered yes to the previous question, answer the following questions:

Please describe your current system of securing your refrigerator.

What are some issues you have experienced with your current system?

**Part 2: User Needs For The Digital Lock**

This section is for figuring out the priorities of the end users based on the current locking solutions.

How often have the lab freezers/refrigerators accidentally stayed open throughout your time in the lab?

* 1-2 times
* 3-4 times
* 5 or more times
* Never

Based on your current refrigerator lock solutions, please list the top three design elements that were insufficient in your experience.

Please explain why these features are insufficient.

Please explain your experience with security around your lab.

**Part 3: Future Design Elements**

This section is about your priorities in looking at possible future design elements for a digital refrigerator lock. Please state your level of priority by selecting one of the three following options: Very Important, Useful But Not Important, and Not Important.

How important is it to be able to monitor the temperature of the refrigerator and have it notify you?

* Very Important
* Useful But Not Important
* Not Important

How important is it to have an app that is associated with the digital lock to record usage of the refrigerator or turn on/off the lock on the refrigerator?

* Very Important
* Useful But Not Important
* Not Important

How important is it that the lock be very difficult to break into?

* Very Important
* Useful But Not Important
* Not Important

How important is the ability for the digital lock to open or close refrigerator doors remotely?

* Very Important
* Useful But Not Important
* Not Important

Based on the previous questions, explain why what you chose is of high priority.

If you would like to explain other priorities that have not been listed, please explain here. Please provide your experience on why this is a priority.

**Part 4: Design Input Target Values**

When constructing this lock, what are some restrictions that might need to be considered during the design process?

What is the highest price range you would be willing to pay for this product?

* $0-$150
* $150-$300
* $300-$450
* Greater than $450

What are the maximum dimensions for the lock system (full height, width, and depth)?

Are there any other specific details and restraints that one should consider when constructing this refrigerator lock?

**Part 5: Free Response**

Please give any final statements that you believe must be considered when creating a refrigerator lock. All concerns or ideas will be considered for this project.

Write down any other questions, concerns, or any other essential ideas that have not been listed that you have about this digital lock app project.