

05/23/2025

Classroom Supply Tracking System

Final Report

By: Rosa Romero, Stella Lopez

Week #7

What particularly is our idea?

Since teachers often struggle with students not returning classroom supplies, particularly more expensive items such as adapters, calculators, and scissors. This leads to financial strain on educators and schools, as these essential tools frequently need to be replaced. To combat this issue, we created a classroom supply tracking system that alerts teachers when an item is taken beyond a designated area.

Key Features of our concept

1. Proximity-Based Alert System – A buzzer is triggered when the tracked item moves beyond a set range
2. Tag- A sticker tag to securely stay on said item. It being a sticker makes it compatible with most items.
3. RFID sensor – Once passed under the sensor, the buzzer triggers.

What was done to accomplish this with the time given? (Weeks 1-7)

Weeks 1-3: As soon as we received confirmation for our final project, we started collecting our supplies. Specifically, our sensor and tags. We began research on how to program our sensor to pick up on the specified tags, and to buzz when done so. When our supplies came, we applied our knowledge to connect the sensor and the tags to it successfully.

Weeks 4-5: These weeks were the beginning stages of our code to properly transmit the data we get from the sensor. Multiple test runs on how the sensor will work when in a classroom. Further development of the software of the sensor with multiple adjustments of the numbers to make sure the tags are detected every time.

Weeks 6-7: We ensured the security of our code, so it would work unfailingly. This was accompanied with executing the finishing touches on the presentation of our idea.

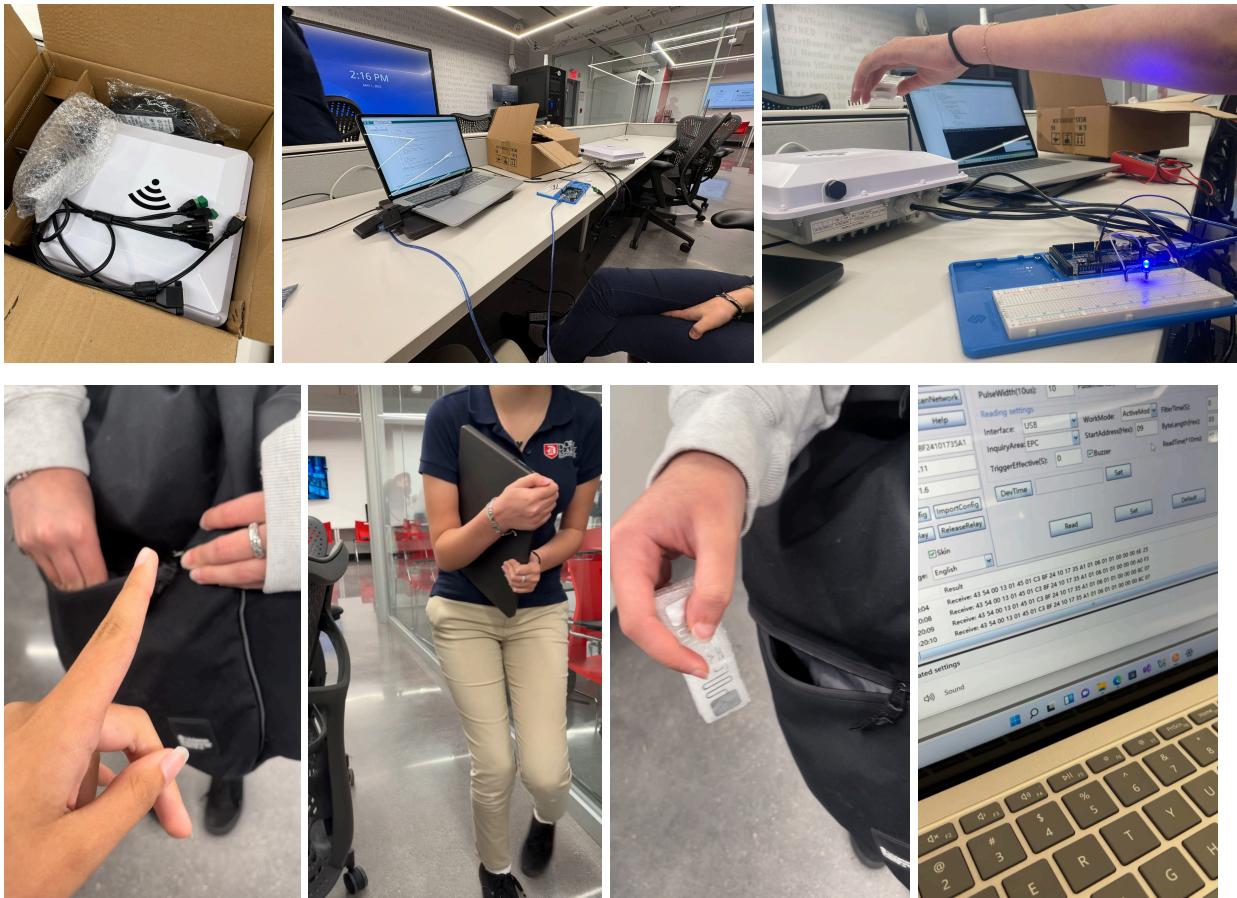
Tasks done by each team member

Rosa: Testing and research

Stella: Coding and research

-Both watched videos on how to use the sensor

Photos throughout the weeks



- Videos & code will be attached under the assignment

Next steps

We plan to present our final product next week, shown in the gantt chart below.

Task		Status	Due date	Timeline
Approval of project	⊕	Done	① Apr 5	! Apr 1 - 5
Supplies/Research on them	⊕	Done	✓ Apr 11	✓ Apr 7 - 11
Sensor setup	⊕	Done	① Apr 18	! Apr 14 - 18
Sensor setup	⊕	Done	① Apr 25	! Apr 21 - 25
Coding	⊕	Done	① May 2	! Apr 28 - Ma...
Coding	⊕	Done	① May 9	! May 5 - 9
Testing	⊕	Done	① May 16	! May 12 - 16
Finishing touches	⊕	Done	✓ May 23	✓ May 19 - ...
Presenting	⊕	Working on it	May 30	May 26 - 30
+ Add task				
			Apr 5 - May ..	Apr 1 - May 30

- Used monday.com

Appendices:

<https://www.geenfc.com/en/Products/UHFRReader/eseries/2023-08-30/335.html>

<https://youtu.be/d9u8pAhFjV0>

<https://youtu.be/aKrijerrdpAs>

<https://youtu.be/Sk-TaB8UVzA>

<https://youtu.be/dOo30L0cZCg>

<https://youtu.be/PeuEk5pQ9Qw>

