

Evergreen Project

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01

Program Information

What is our project actually about?



Credit: <https://www.lopezurbanfarm.com/>

Meet our Beneficiary

Lopez Urban Farms is a non-profit farm that works to give back to the community by planting crops for the public to harvest at no cost. The location gains its funding through donations.

Issues at Lopez Urban Farms

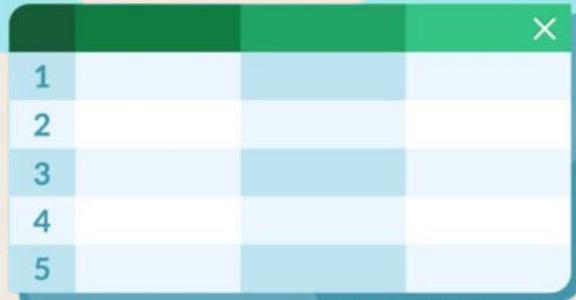


Credit: [creazilla](#)

When we visited the farm, the Operations Director explained that one of their main challenges was the lack of a method to track volunteers and their work, especially in an environment without Wi-Fi. The farm had no way of contacting the volunteers due to a lack of saved contact information.

Our Solution

After our extensive conversation with the Operations Manager about what projects would be beneficial to them, we came to the solution of creating a volunteer log book that saves information into a spreadsheet.



1			
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Credit: [istockphoto](#)



02

Contributions

How does our program help the farm?

Impact



Credit: [freepik](#)

Our program has allowed the farm to locally store all of their volunteer's information without the use of Wi-Fi. Since all the data is kept on a spreadsheet, only one device (without internet access) is required to log everyone in.

03

Details/Design

How did we implement our program?

What does our program do?

Take input.

Our program begins by requesting the user for any necessary information, such as their name, email, clock-in time, clock-out time, and tasks completed.

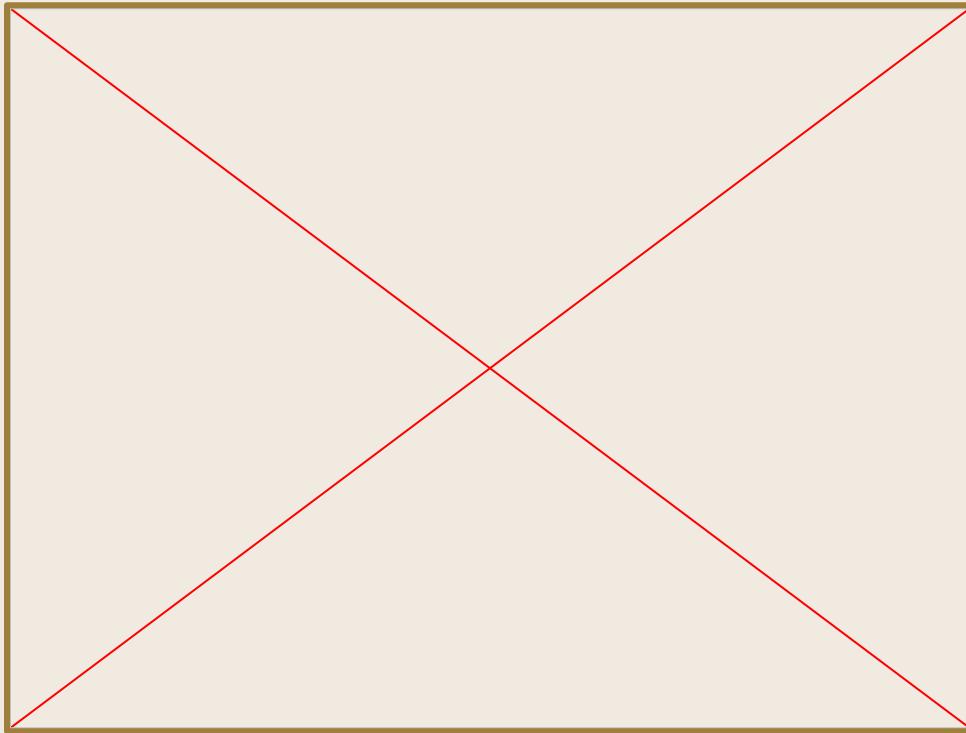
Download the data to a CSV sheet.

After receiving the information, the data is saved to a local spreadsheet. Its location can be altered to become a shared file or to the client's request.

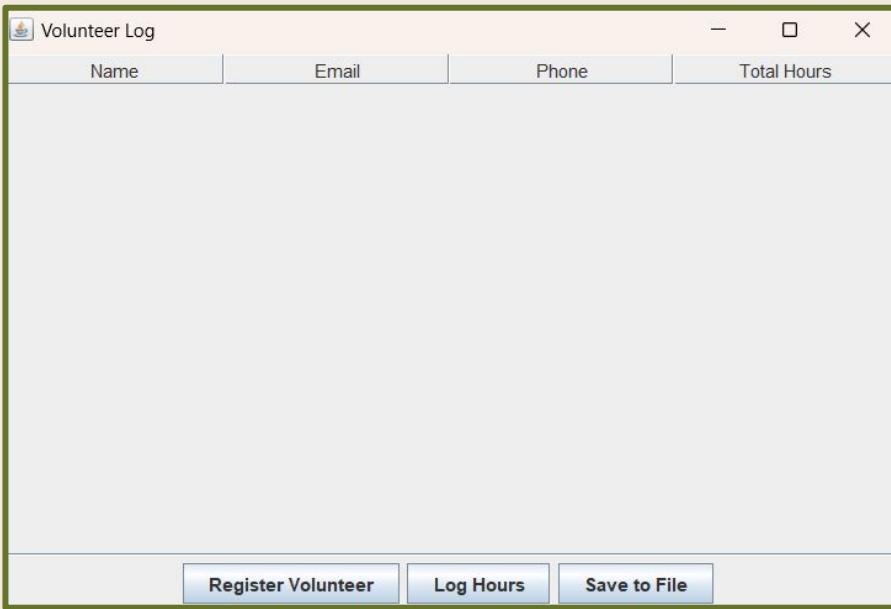
Make the data accessible.

With the new spreadsheet, the data can be accessed without Wifi as it is saved locally.

Implementation & Demo



Volunteer Interface



Credit: Photo retrieved by our program.

Our interface provides a table that displays their information simply. Each button is interactive and provides a basic interface that our client and the farm's volunteers can understand. We record their contact information and log their hours.

Register Volunteer

Register Volunteer X

Name:

Email:

Phone:

? OK Cancel



Credit: Photos retrieved by our program.

Log Hours

Log Hours X

Enter volunteer's email:

OK Cancel

Log Hours X

? Start Time (HH:mm):
End Time (HH:mm):

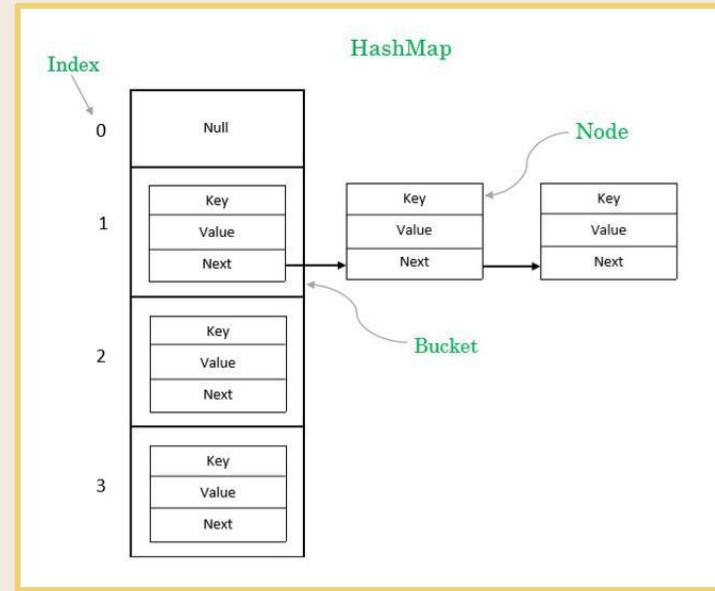
OK Cancel



Data Structure

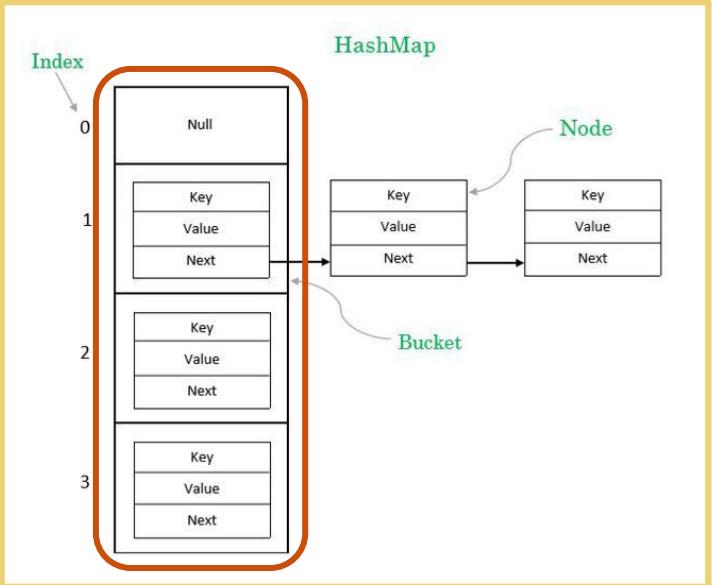
HashMap

With a HashMap, the volunteer's email serves as the key and their logged total hours serve as the value. This is useful for Lopez Urban Farm as they can easily manage their volunteers and send customized messages with this new information.



Credit: [geeks for geeks](#)

Data Structure



Credit: [geeks for geeks](#)

Bucket

All the key-value pairs are stored into a hashing structure known as a bucket, which makes it easier to search through the information.



04

Improvements

How can our program be better?

Areas of Improvement



Credit: [agriculture world](#)

- Offer a wider range of volunteer options tailored to client requests.
- Design a visually appealing and more user-friendly interface.
- Create methods or classes to help generate emails for client.

05

Setbacks

What setbacks did we face?

Challenges Faced

Due to other assignments, courses, and projects, our biggest difficulty was time. Another major issue came from our small group size. With only two members, we had to figure out how to divide the work amongst ourselves.



Credit: [freepik](#) and [public domain pictures](#)

Solutions

We resolved our first difficulty by allocating proper time toward the project and soft deadlines to ensure we were completing our sections. With our small group size, we found it easier to communicate and designate specific tasks, ensuring that we didn't overlap our responsibilities.



Credit: [istock](#)

06

Scalability

What does the future of this project look like?

Next Steps



Credit: [stock.adobe](#)

One way we could scale our project is by creating methods that allow the volunteers to login on their own devices (e.g. through a QR code). This would increase our program's functionality and its accessibility.

Conclusion



Problem

Lopez Urban Farm required a method to record its volunteers and a method of tracking the number of hours they worked. They also had no means of contacting their volunteers.



Solution

Our spreadsheet program uses hash maps to provide the farm a way to store volunteer's information. The farm can use this program to send out newsletters or updates.

Thank you!

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