SRC Project Proposal

**Group Name:** *What’s A Terminal*

# Team Members:

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# Summary:

By developing a management system through a web application with a Java backend, we aim to provide the Lopez Urban Farm with easier management of crops while informing the community of their available crops.

# Problem Statement:

In collaboration with Farmer Bianca and Stephan of the Lopez Urban Farm, an assessment revealed the absence of an effective and up-to-date management system to oversee the inventory of stored, growing, and available crops. This lack has hindered the farm's operational efficiency and its ability to inform the community about the currently harvestable produce.

# Proposed Solution:

The proposal entails the development of a Java-based Application Programming Interface (API) that interfaces with a database through a web application. This solution is designed to provide farmers with a comprehensive platform for managing their crop inventory efficiently. The capabilities of this platform will include adding, updating, and removing information about crops that are ready for or have been harvested. This initiative will not only facilitate better inventory management but also promote transparency with the community by displaying available produce. Additionally, incorporating a feature to export the database contents to an XLSX format will enable the farm to conduct detailed data analysis, thereby supporting their endeavors to secure additional grant funding.

# Data Structures (in Java):

- **Stacks:** To implement undo/redo functionality, enabling the users to revert or repeat their actions as necessary.

- **Arrays:** To facilitate the dynamic modification and addition of data, allowing for flexible updates to the crop inventory.

- **Linked Lists:** To enable the categorization of crops and their related data, ensuring that information such as quantity and type can be efficiently managed and modified.

# Input Method:

- Utilization of a web application to allow for data entry of crops from employees and volunteers.

# Output Deliverables:

- A responsive web application for real-time data management and visualization.

- Capability to generate reports in CSV/XLSX format for data analysis and reporting purposes.

This initiative aims to empower the Lopez Urban Farm with the necessary tools for efficient crop management and community engagement, thereby enhancing its operational effectiveness and support for local food sustainability.

# Conclusion:

In conclusion, through the use of a Java-based API, we can address the inventory management challenges faced by the Lopez Urban Farm. With a focus on real-time data management, user-friendly interfaces, and analytical capabilities, the project holds the potential to significantly improve efficiency and help them better reach their goals of supporting the local community with food and other resources. By incorporating technology into the farm, we envision a future where the Lopez Urban Farm can thrive in its efforts and better connect with its target audience.