Eggventory Developer Guide

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## 1. Introduction

Eggventory is a system to consolidate the management of inventories that stock electronic components. It is designed to facilitate the tracking of movement of inventory in an engineering laboratory in an easy to use interface. It can also be used to offer additional information specific to electronics, such as datasheets and links to similar components.

This document describes the architecture and specifications of Eggventory. It is intended for developers, software managers and UI designers.

## 2. User Profile

* Lab technician from Faculty of Engineering in NUS
* In charge of managing inventory of Engineering labs
* Prefers typing over other means of input
* Types above 60 words per minute
* Comfortable with CLI

## 3. Value Proposition

An integrated solution to managing your inventory.

## Appendix A: User Stories

Priorities: High (must have) - \*\*\*, Medium (nice to have) - \*\*, Low (unlikely to have) - \*

|  |  |  |  |
| --- | --- | --- | --- |
| **Priority** | **As a …​** | **I want to …​** | **So that I can…​** |
| **\*\*\*** | New user | See usage instructions | Refer to instructions when I forget how to use the app. |
| **\*\*\*** | Lab technician | Keep track of my stocks and its quantities. | Be prepared for any shortages in the future. |
| **\*\*\*** | Lab Technician | Edit the quantity of a stock | Change it if there are any errors. #46 |
| **\*\*\*** | Lab technician | View my inventory | Have an overview of all the stocks I oversee. #32 |
| **\*\*\*** | Lab technician | Delete stocks | Remove stocks that I no longer keep track of. |
| **\*\*\*** | Lab technician | Add a new stock type | Prevent adding stocks to an invalid stock type. |
| **\*\*\*** | Lab technician | Edit the name of a stock type | Change it quickly if I made an error when adding. #46 |
| **\*\*\*** | Lab technician | View my current list of stock types | Have an overview of all the stock types I oversee. #32 |
| **\*\*** | Lab technician | Delete a stock type | Remove stock types that are irrelevant. |
| **\*\*\*** | Lab technician | Keep track of my inventory loans | Acknowledge loans that are returned. |
| **\*\*\*** | Lab technician | Be alerted when loans are overdue | Remind students/professors to return their loaned stocks. |
| **\*\*\*** | Lab technician | View all loans | Have an overview of all the stocks that are being loaned out. #32 |
| **\*\*\*** | Lab Technician | Edit the loan list | Change it quickly if I made an error when adding. #46 |
| **\*\*\*** | Lab technician | Add multiple stocks under a single loan | See multiple loans made by the same individual. |
| **\*\*\*** | Lab technician | Create a loan template | Loan the same set of stocks to multiple students/professors easily |
| **\*\*\*** | Lab Technician | Keep track of stocks that are lost | Know when I am running low on available stock. |
| **\*\*\*** | Lab technician | Find a stock by its name or stock type | Obtain the quantity of the stock easily. |
| **\*\*** | Lab technician | Export the inventory/parts of the inventory as a file | I can send them to my superiors/professors. |
| **\*\*** | Lab technician | View the stocks needed by a class | Plan and reserve stocks to ensure there is no shortage during the semester. |
| **\*\*** | Lab technician | View the stocks required by the coming semester | Obtain the required materials in time |
| **\*** | Lab technician | Track how much inventory I lose in a month | Do yearly budgeting. |
| **\*** | Lab technician | Have automation in replenishing stocks that are in shortage | Save time checking for availability of resources. |
| **\*** | Lab technician | Reserve lab equipment for classes | Ensure equipment are available. |
| **\*\*** | Lab technician | Obtain the specifications and details of the stocks | Find all required information about a stock in one place. |
| **\*** | Lab technician | Automate entry of stocks by scanning | Speed up the entry process. |
| **\*** | Lab technician | Have an image of how the stock looks like. | Visually ensure that the stocks loaned/recorded are correct. |

## Appendix B: Use Cases

* System: Eggventory
* Actor: Lab Technician
* Use Case: View the state of the inventory

1. Lab Tech enters the command to show the current inventory

2. Eggventory displays every stock in the inventory, including its respective stock quantity and stock type.

* Extension:

1a. Lab Tech wants to view the current list of stock types.

1a1. Lab Tech enters command to view current list of stock types

1a2. Eggventory displays all the stock type registered under it.

1b. Lab Tech wants to view all the current loans by Eggventory.

1b1. Lab Tech enters command to view loans.

1b1. Eggventory displays all loans by students that have yet to be returned.

* System: Eggventory
* Actor: Lab Technician
* Use Case: Change the stock quantity of a particular stock

1. Lab Tech enters the command to edit the current inventory followed by the stock code, the stock attribute: quantity, and its new value.

2. Eggventory shows a message informing the user of a successful change.

* System: Eggventory
* Actor: Lab Technician
* Use Case: Search stocks by name

1. Lab Tech enters command to search stock followed by the stock name or stock code to be queried.

2. Eggventory displays the stock and its respective stock quantity and stock type for those who name partially or completely matches.

* Extension:

1a. User wants to search stock type by name

1a1. Lab Tech enters command to search stock type followed by the stock type name to be queried.

1a2. Eggventory displays the stock type whose name partially or completely matches.

* System: Eggventory
* Actor: Lab Technician
* Use Case: Loan of stocks to students

1. Lab Tech enters command to create a template of the loan.
2. Lab Tech keys in the stock code and its respective quantity needed.
3. Eggventory saves the template.
4. Lab Tech enters command to loan via template to students.
5. Eggventory saves the loan.

* Extension:

2a. Stock code is invalid

2a1. Eggventory prompts Lab Tech to reenter the stock code and quantity.

4a. There are stocks in the template that are unavailable to be loaned

4a1. Eggventory rejects the loan if and warns the Lab Tech.

4b. Lab tech wants to loan a single stock and not via a template

4b1. User enters command to loan stocks one by one to students

4b2. Eggventory saves the loan.

* System: Eggventory
* Actor: Lab Technician
* Use Case: Mark stocks as lost

1. Lab Tech enters command to mark stock as lost, followed by the stock code and quantity lost.
2. Eggventory saves the information.

* System: Eggventory
* Actor: Lab Technician
* Use Case: Undo command

1. Lab Tech enters undo command.
2. Eggventory undoes the previous command requested.

## Appendix C: Non-functional Requirements

* Must work on any mainstream OS with Java 11 or above installed.
* Must be able to respond to the user within 1.5 seconds of any input.
* Must be able to store at least 1000 different stocks and 100 stock types.
* Must have at least 1GB of free disk space.

## Appendix D: Glossary

|  |  |
| --- | --- |
| **Lab Tech** | Technician in charge of keeping track of the inventory of the lab. The primary user of our system. |
| **Stock** | An item that our inventory system is managing. (eg. 100ohm resistor) |
| **Stock Description** | Name of the stock. |
| **Stock Code** | The unique string of characters used to identify the stock. |
| **Stock Type** | Type of stock. (eg. resistors) |