Pleasant View Golf Course Maintenance Inventory App: Project Requirements

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1   Background

During the week of 12-18 March, 2017, Pleasant View Golf Course (hereafter PVGC) Greens Superintendent Kevin Hurd informed me that Assistant Superintendent Matt Statz and Mechanic Eric Meinholz desired a computer application to create and manage a database of their equipment and parts inventory. Currently the inventory is maintained with somewhat irregular counts and tracked on paper and/or Excel spreadsheets. A more convenient, more easily updated system is wanted.

It is hoped that primary development and alpha-testing can be finished by mid-May, when the golf season begins to get especially busy. Since this is such a small-scale, personalized project, beta-testing will essentially be done by the enduser. Fixes, refactoring, and general improvements will be done on-the-go as deemed necessary.

2   Platform

The PVGC maintenance shop uses Windows 10 PCs. Development will be done primarily on Linux (Arch Linux) and Oracle VirtualBox Windows 10 Virtual Machines running on the Linux hosts.

2.1   Primary implementation language

To ensure maximum portability, the application will be written primarily in Java 8, with JavaFX used for building the GUI.

2.2   Database

Current plans are for a MariaDB implementation of the mysql server for the database. Connection to the SQL server will be achieved with the JDBC driver.

3   Data to catalog

NOTA BENE: The information in this section is subject to change based on client needs.

3.1   Equipment

For equipment items (e.g. greens mowers, sprayers, aerators, etc), the following parameters will need to be catalogued:

- Make

- Model

- Machine ID number (e.g. greens mower #6)

- Model year

- Date purchased (estimated, if not known)

- Date info updated (`CURRENT_TIMESTAMP`)

3.2 Parts

Spare parts kept on hand will be tracked with the following parameters:

- Description (e.g. air filter)

- Manufacturer

- Manufacturers part number

- Manufacturer's price

- Alternative manufacturer 1

- Alternative manufacturer 1 part number

- Alternative manufacturer 1 price

- Equipment on which part is used

4 GUI functionality

The GUI need not be especially flashy. Utility and ease of use should be the primary motivations.

4.1 Start page

On launch, the application should display a logo, and menu items from which the enduser will select which type of task he wishes to accomplish. Tasks should include:

- View inventory

    - View inventory by item category

- View individual item

- Edit individual item

- Edit multiple items

    - Edit items by category

- Search inventory

4.2 View inventory

On viewing inventory, the GUI should display basic information about each item in a grid. Enduser should be able to click an item to view it individually for more detail. Grid should be setup similar to:

make	model	ID	year

4.3 View individual item

On viewing an individual item, all available data should be displayed, but care should be taken to not make the screen to crowded and distracting.

4.4 Editing

Editing screens should be similar to the viewing pages, but with a focus on simplicity of altering a data entry.