Final Project: Equipment Storage System

*Sam McDowell*

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Algorithm

This program creates an equipment storage system for WePaintHouses LLC. They will be buying two storage units, one for Ladders, and one for Scaffolds. The program will allow employees to create an entry for new equipment and store them in the respective storage units.

A class called Equipment will be created to represent the commonalities between Ladders and Scaffolds in inventory. It will have an ID, cost, date purchased, and useful life. It will have getters and setters for these properties. It will also have the << operator overloaded for printing and the < operator overloaded for sorting.

A Ladder will extend a piece of equipment. It should have the additional properties height, style, and weight limit, as well as getters and setters for these properties.

A Scaffold will also extend a piece of equipment. It should have the additional properties length, width, height, and weight limit as well as the respective getters and setters.

A storage unit will be responsible for storing an array of equipment, either ladders or scaffolds. It will have an ID, a description, length, width, and height, a rental date, auto-renew and humidity control properties. There should be getters and setters for each of these properties. Additionally, it will have << overloaded to print a summary of these properties. It should also have a method to add a piece of equipment to storage. This should only work if the ID of the new piece is unique. There should also be a method to remove an item from storage given an ID. Finally, it should be able to print all the items currently in storage.

In the driver, the program will start with a menu. That menu will give the user the option to configure a container, add a new piece of equipment, remove equipment, display all equipment, or exit. Each of these options after executing any option, it will wait for the user before continuing.

Screen-Shots of Running Program

A screen shot of a computer

Description automatically generated

A screenshot of a computer program

Description automatically generated

A computer screen with white text

Description automatically generated

A computer screen with white text

Description automatically generated

A screenshot of a computer

Description automatically generated

Integrity Statements

* I have not shared the source code in my program with anyone other than the pre-approved human sources.
* I have not used source code obtained from another student, or any other unauthorized source, either modified or unmodified.
* If any source code or documentation used in my program was obtained from another source, such as the course textbook or course notes, that has been clearly noted with a proper citation in the comments of my program.
* I have not knowingly designed this program in such a way as to defeat or interfere with the normal operation of any machine it is graded on or to produce apparently correct results when in fact it does not.