

# CS3343 Software Engineering Practice

2022/23 Semester A

Group Project for Group 13

## XBOX

### Box Storage Management System

#### Release Summary

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# Table of Content

- 1.Overview: .....3
- 2.Progress:.....3
  - 2.1 Release 1.0:.....3
  - 2.2 Release 2.0:.....4
  - 2.3 Release 3.0 .....6
- 3.0 Release date: .....9

# 1.Overview:

Box Storage System has three releases in total. Each version of the release has a significant improvement in features. Also, each release has bug fixings and small patches for updating features.

## 2.Progress:

### 2.1 Release 1.0:

It is the first release of our product, which is a blueprint version of our system. It supports Box allocation and stores for Admin check-in. The whole progress is only controlled by the Administer. It uses the command line approach to run the command. The Admin checks the Box situations and updates the information using the command line for the record.

```
Request -n 2
```

```
Success, Please remember the boxids 001, 002
```

### Functions:

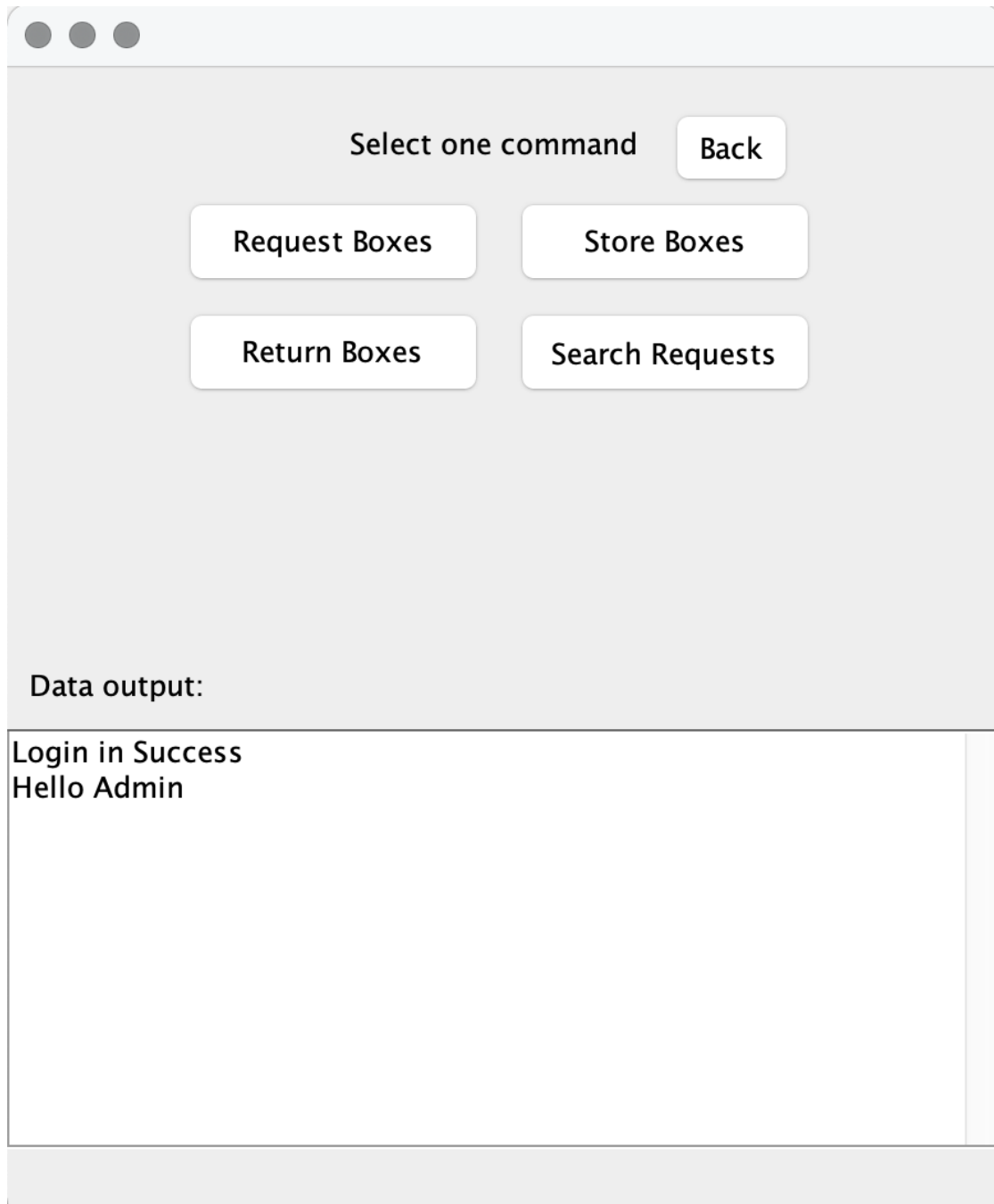
1. Request Boxes. Request a new Box for users to store things.
2. Store Boxes. Store the Box for the scheduled time and calculates the cost.
3. Return Boxes. Reset the Boxes to available status.

### Patches:

- 1.1 Write the logic that user may return empty box.
- 1.2 Change the Database class to singleton.
- 1.3 Add detailed basic class for data operation like the RentableAllocator, RentableManager, RequestSearcher.
- 1.4 Details the status of the Rentable objects. Have more class implement the RenatableStatus class.

## 2.2 Release 2.0:

We provide the GUI component for the product. Provide a more understandable way to use the system. The Admin does not need to learn further the command of recording the boxes. And we have JSON files to protect the data so that the system can run anytime and place. We add login and register functions to login into the system. And all system output will be listed at the bottom of the UI.



Select one command [Back](#)

[Request Boxes](#) [Store Boxes](#)

[Return Boxes](#) [Search Requests](#)

Data output:

Login in Success  
Hello Admin

**New Functions:**

1. Provide login and register functions to login into the System
2. Add JSON files to store the records.
3. Comprehensive Graph UI

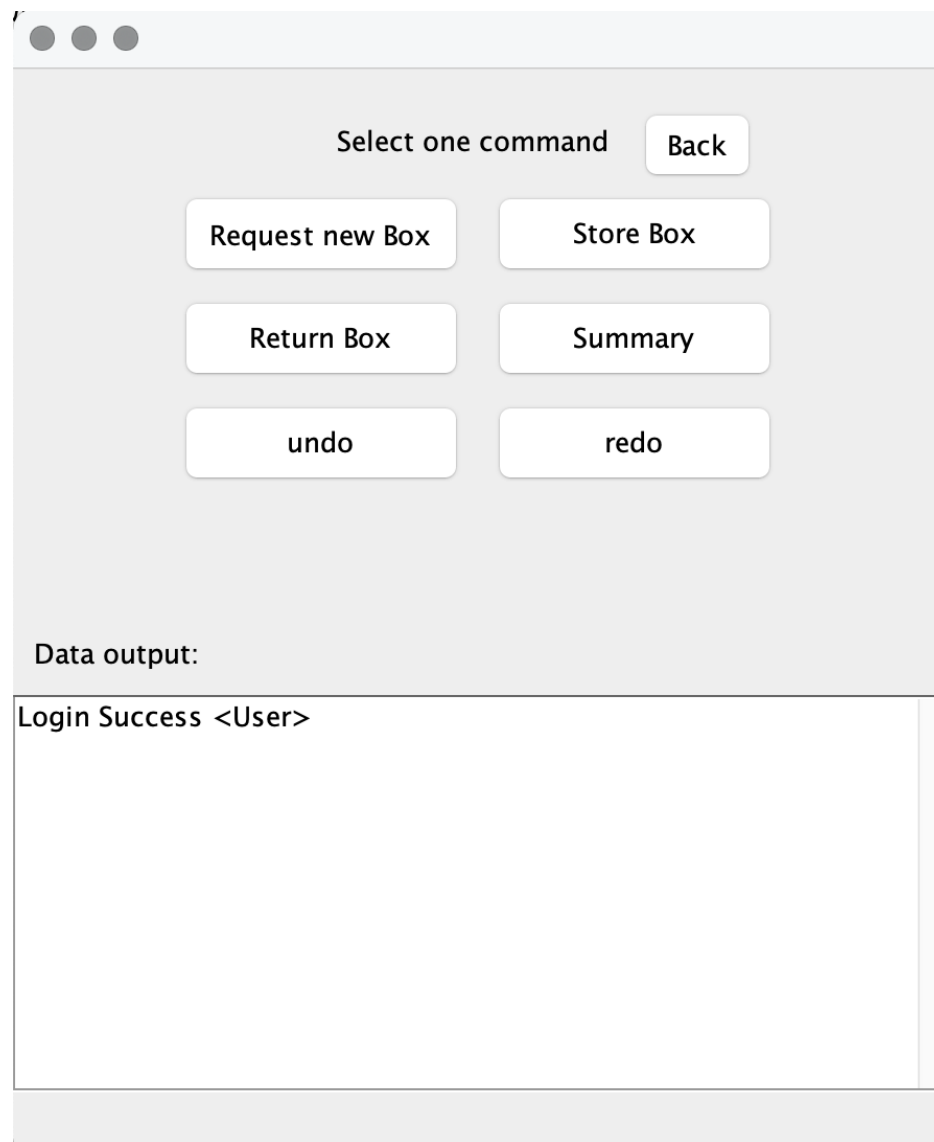
**Patches:**

- 2.1 Add the pop-ups for error message.
- 2.2 Fix some text label's position and content.
- 2.3 Adding new exceptions for command error.
- 2.4 Fix the bug of the data output is not ordered.
- 2.5 Fix the bug of the JSON file by using the relative address.

## 2.3 Release 3.0

An important improvement for release 2.0. We add a customer version of the system. Now the whole system is controlled by both Admin and the User. Instead of The Admin requests and stores boxes for check-in. The User requests new boxes and request requests for store or returns boxes. The Admin only needs to check the requests and confirm or reject them. In that case, the User can request and check boxes at any time without the Admin's assistance. The separate version of the system improves efficiency and lightens the burden of the Admin. And we canceled the register for Admin, so there only exists one Admin account, which will be provided by default.

### User Interface:



The screenshot shows a user interface window with a title bar containing three window control buttons (minimize, maximize, close). The main content area has a light gray background. At the top, it says "Select one command" followed by a "Back" button. Below this, there are six buttons arranged in a 3x2 grid: "Request new Box", "Store Box", "Return Box", "Summary", "undo", and "redo". At the bottom of the main area, it says "Data output:". Below this is a large white rectangular area for displaying output, which currently shows "Login Success <User>".

Select one command Back

Request new Box Store Box

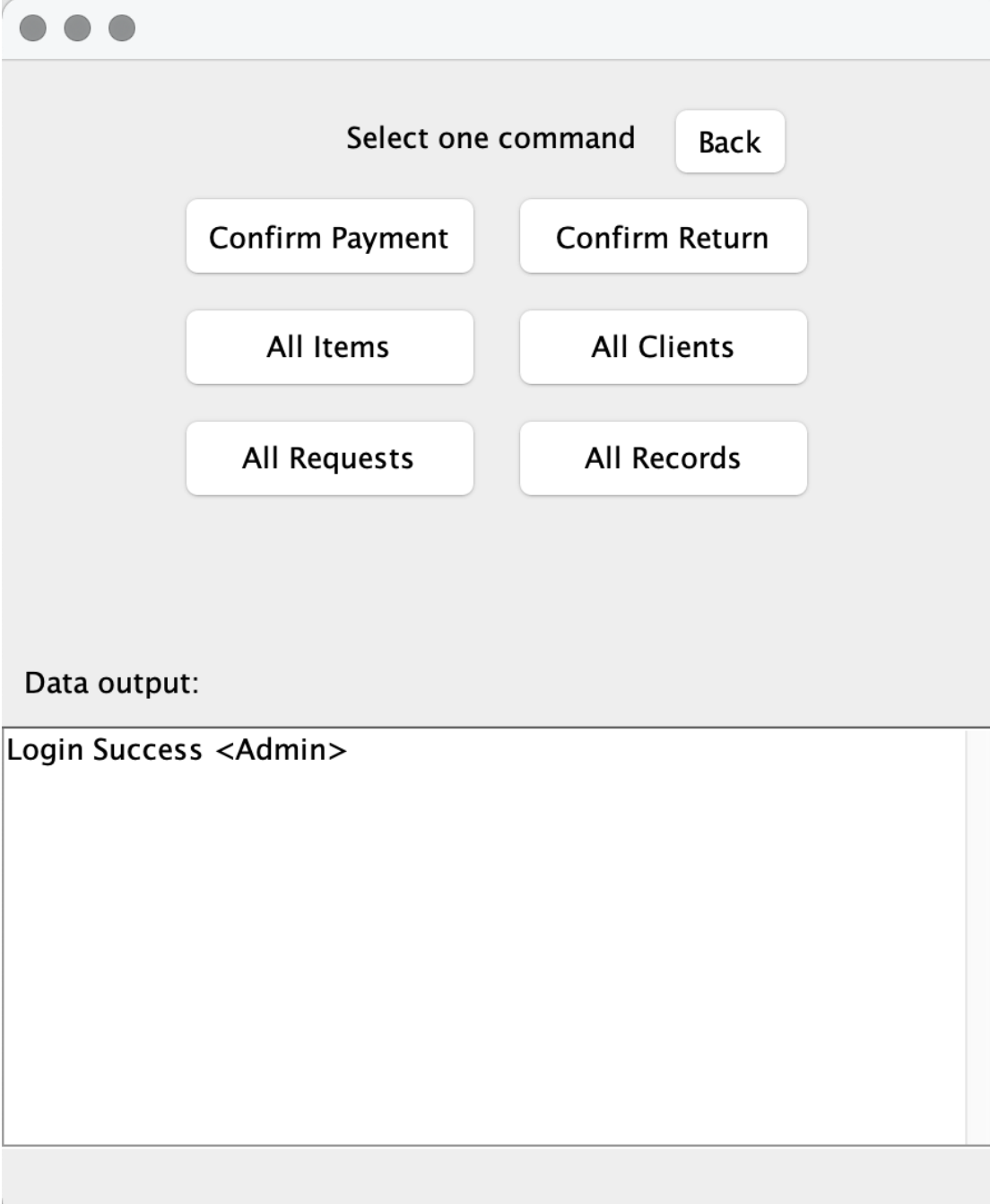
Return Box Summary

undo redo

Data output:

Login Success <User>

## Admin Interface:

A screenshot of a web application window titled "Admin Interface". The window has a light gray header bar with three dark gray circular window control buttons (minimize, maximize, close) on the left. The main content area has a light gray background. At the top, it says "Select one command" followed by a "Back" button. Below this, there are six buttons arranged in a 3x2 grid: "Confirm Payment", "Confirm Return", "All Items", "All Clients", "All Requests", and "All Records". At the bottom of the main content area, it says "Data output:". Below this is a large white rectangular area with a thin gray border, containing the text "Login Success <Admin>". The window has a thin gray footer bar.

Select one command Back

Confirm Payment Confirm Return

All Items All Clients

All Requests All Records

Data output:

Login Success <Admin>

**New Functions:**

1. Add the User version of the System. Separate the responsibility of Admin.
2. Change the logic of storing and requesting boxes.
3. Add undo redo command for both Admin and User.
4. Add summary command for lists the boxes for checks.

**Patches:**

- 3.1 Add Interface classes to invoke the command for Admin and User.
- 3.2 Fix the bug for Interface, cancel the singleton pattern.
- 3.3 Fixing bugs for command intersections of Admin and User.



### **3.0 Release date:**

Version	Release Date
1.0	24 <sup>th</sup> September 2022
2.0	10 <sup>th</sup> October 2022
3.0	25 <sup>th</sup> October 2022