Diagram

Description automatically generated

Figure Relationship Table

|  |  |
| --- | --- |
| Admin | |
| admin\_id | Auto increment integer |
| admin\_user | String |
| admin\_pass | String |

1.

Table Admin Table

Admin table stores the admin username and password, which manages the creation/deletion of equipment and customers.

|  |  |
| --- | --- |
| Customer | |
| cust\_id | Auto increment integer |
| email | String |
| f\_Name | String |
| l\_Name | String |
| phoneNo | Integer |
| admin\_id | Integer |

2.

Table Customer Table

In this table, this stores the customer information. There is a column for admin\_id because it will store here which admin added/deleted/updated the customer’s information. Moreover, email and phoneNo must be unique – they cannot be duplicated.

|  |  |
| --- | --- |
| Equipment | |
| equip\_id | Auto increment integer |
| equip\_name | String |
| brand | String |
| price | Double |
| quantity | Integer |
| admin\_id | Integer |

3.

Table Equipment Table

When it comes to storing the equipment information or what others call ‘inventory’, this is the table for it. This is being managed by the admin user as well.

|  |  |
| --- | --- |
| Rent | |
| rent\_id | Auto increment integer |
| cust\_id | Integer |
| rent\_start | Date |
| return\_date | Date |
| quantity | Integer |
| equipment\_id | Integer |
| price | Double |
| fine | Integer |
| returned\_date | Date |

4.

Table Rent Table

This table is the record of customers renting an equipment from our inventory. If the customer rented an equipment, fine and returned\_date are null, this will only be filled after the customer return the equipment rented from our inventory.

# Usability Heuristics

1. **Visibility of System Status** – In our application, an example of the first usability heuristic is when the user entered a wrong user credentials, our application will give the user feedback indicating that the details are wrong.  
   Graphical user interface, text, application

   Description automatically generated
2. **Match between system and the real world –** The interface is very straightforward; it is easy for the user to learn and remember how the interface works. We have ensured that users can understand meaning without having to go look up a word’s definition.

Graphical user interface, application, Word

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1. **User control and freedom –** User can clear all the textfields with a press of a button and go back to main menu by clicking the home button.

Graphical user interface, text, application

Description automatically generated

1. **Consistency and standards–** We uses the same format in every window – home button on the upper left, combobox for IDs, disabled textfields to maintain consistency in our application.

Graphical user interface, application

Description automatically generated

1. **Error prevention –** To prevent users in committing an error, we only show the available IDs in every combobox ID like the Equipment ID where it only shows ID 12 and 21 instead of the user inputting an ID. Also, the textfields are disabled, it only shows the data from the database.

Graphical user interface, application

Description automatically generated

1. **Recognition rather than recall –** To make life easier for the user, instead of going back to the Orders window to see the name of the customer that rented the specific equipment, the application will automatically display the customer’s name, equipment name, and the return date. The user just need to select which Rent ID from the combobox.

Graphical user interface, application

Description automatically generated

1. **Flexibility and efficiency of use –** This has not been implemented in the application.
2. **Aesthetic and minimalist design –** We have ensured that the visual elements of the interface support the user’s primary goal.

A screen shot of a video game

Description automatically generated with low confidence

1. **Help users recognize, diagnose, and recover from errors –** The example below shows that we have shown the error message in plain language, precisely indicated the problem, and constructively suggested a solution.

Graphical user interface

Description automatically generated

1. **Help and documentation –** Documentation is included in the submitted files.