**L&MT RENTAL TOOLS SYSTEM**

**APPLICATION DESCRIPTION**

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**Version:** V2.0

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# Abstract

This design document serves as a comprehensive blueprint for the "L & MT Rental Tools" system, fulfilling the requirements of Assignment 1. The document offers an in-depth overview of the system, outlining key entities with detailed descriptions, specifying essential business rules, application functions, and making necessary assumptions to guide the design process.

# Task’s introduction:

|  |  |
| --- | --- |
| Items | Description |
| Group members | Liping Wang, Ting Cheng, Mint |
| Chosen scenario | Rental Tools |

# System introduction:

The proposed system is an all-in-one tool rental and order management platform that comprises four fundamental components: user management, employee management, tool management, and order management. It enables users to register, manage their profiles, and ensures. Employee management facilitates staff onboarding, scheduling, and role-based access control. Tool management maintains an organized catalog of rental tools, while order management covers the entire order lifecycle, from creation to fulfillment. This integrated solution aims to optimize tool rental operations, streamline employee workflows, enhance customer experiences, and maintain accurate inventory records.

# Components Lists

There are 4 entities for this application show as below:

|  |  |  |
| --- | --- | --- |
|  | Components Items | Description |
|  | Customers | represent individuals or businesses that utilize the rental tools service. |
|  | Employees | represent the staff members involved in managing the tool rental and order processing |
|  | Tools | represent the requests made by customers to rent tools |
|  | Orders | represent physical items available for rent within the system. |

The functions of components diagram as the Figure1.

A diagram of a company

Description automatically generated

*Figure 1 the structure of components*

# Customers

## Customers description

This component is used to keep track of the client’s customers. Customers are the end-users of the system. They are responsible for creating accounts within the platform, providing personal or business information, and managing their profiles. Each customer account is uniquely identified, and their actions, such as order placement and return, are recorded in the system for tracking and customer support purposes. Customers have various attributes associated with their profiles, including contact details, payment methods, and order history.

## Add/Update description

* location the last record and click “Next”
* Input information in the blank record.

The functions of Add/Update Action as the Figure 2.

A screenshot of a computer

Description automatically generated

*Figure 2 the Add/Update Action in Customers*

* Click “Add/Update Customer” to add the new record.
* Double check in application or dbo.customers to secure the record has added.

## delete description:

* Locate the record desired to delete.
* click “delete” and confirm the action.

The functions of Delete Action as Figure 3.

A screenshot of a computer

Description automatically generated

*Figure 3 the Delete Action in Customers*

* Double check in application or dbo.customers to secure the record has deleted.

## search description

* Click “Previous” or “Next” to display the recursive orders
* Click “First” and “Last” to locate the specific records
* Right-click top, select close and leave the application

# Employees

## Employees description

Employees are essential for the internal operations of the system. They include ID, name, loginUserName, roles, and department. Employee management encompasses onboarding, role assignment, scheduling, and performance tracking. Different employee roles and departments have varying levels of access to the system, ensuring that employees can only perform tasks relevant to their positions. Employee profiles typically include personal information, contact details, and credentials. The system tracks their login activity and actions taken within the system for audit purposes.

## Add/Update description

* location the last record and click “Next”
* Input information in the blank record.
* Click “Add/Update Customer” to add the new record.

A screenshot of a computer

Description automatically generated

* Double check in application or dbo.customers to secure the record has added.

## delete description:

* Locate the record desired to delete.
* click “delete” and confirm the action.

A screenshot of a computer

Description automatically generated

* Double check in application or dbo.customers to secure the record has deleted.

## search description

* Click “Previous” or “Next” to display the recursive orders.
* Click “First” and “Last” to locate the specific records.

# Tools

## Tools description

Tools are the physical assets managed by the system. Each tool is uniquely identified and categorized for easy retrieval. Tool records include details such as the tool's name, model, manufacture, category, purchase price, rental fee, and inventory. Inventory is tracked in real-time, which fluctuates along with the order quantity. The system also provides the category alternation for tools to output responding statics reports. In-depth design, tools have associated images and documentation to aid customers in making informed rental choices. Employees responsible for tool management ensure that tools are maintained, repaired, and categorized appropriately, and they update the system with the latest information on tool availability and condition.

## Add/Update description

* location the last record and click “Next”
* Input information in the blank record.
* Click “Add/Update Tools” to add the new record.

A screenshot of a computer

Description automatically generated

* Double check in application or dbo.customers to secure the record has added.

## delete description:

* Locate the record desired to delete.
* click “delete” and confirm the action.

## search description

* Click “Previous” or “Next” to display the recursive orders.
* Click “First” and “Last” to locate the specific records.

# Orders

## Orders description

Orders are a core element of the system, serving as the bridge between customers, employees, and tools. When a customer places an order, it initiates a structured process. Orders are created with details about the general order information including order\_date, end\_date and deposit setting. And each order line in the order will also list in below form which can add, delete, and update. Once orders are placed, the system manages order fulfillment, including tool preparation and delivery scheduling. When the rental is complete, the order is closed, tools are checked for any damage, and payment is processed. Order records are kept for tracking purposes and can include order status, history, and associated customer and tool information.

## Add/Update description

* location the last record and click “Next”
* Input information in the blank record.
* Click “Add/Update Tools” to add the new record.

A screenshot of a computer

Description automatically generated

* Double check in application or dbo.customers to secure the record has added.

## delete description:

* Locate the record desired to delete.
* click “delete” and confirm the action.

## search description

* Click “Previous” or “Next” to display the recursive orders.
* Click “First” and “Last” to locate the specific records.