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[company name]

User Instruction Manual

Inventory Management System

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## Introduction

**Welcome to the Inventory Management System!**  
This system is designed to streamline inventory and order management for small to medium-sized enterprises. Its user-friendly interface and robust features enable efficient tracking, updating, and managing of inventory, orders, and users.

## System Requirements

* **Operating System:** Windows 10/11, macOS, or Linux
* **RAM:** Minimum 4GB (8GB recommended)
* **Storage:** Minimum 500MB free space
* **Processor**: Dual-core 2.0 GHz or higher
* **Software Dependencies:**
  + Python 3.9+
  + MySQL Server
  + Flask Framework
  + A web browser (Chrome, Firefox, or Edge recommended)

## Installation Guide

1. Clone the project repository to your local system: <https://github.com/alexnung/FinalProject>
2. Download and install a suitable web browser (Chrome, Firefox, or Edge recommended)
3. Download and install the latest version of Python: <https://www.python.org/downloads/>
4. Download and install the latest version of MySQL server: <https://www.mysql.com/downloads/>
5. Run the following command via the OS terminal: pip install Flask
6. Run the following command via the OS terminal: pip install mysql-connector-python
7. Run the following command via the OS terminal: pip install flask-cors
8. Create the required SQL tables via Workbench using the script found in the “TableCreation.sql”

## Getting Started

1. Open the OS terminal in the “app” folder and run: python app.py
2. Check if MySQL is running in the background
3. Now open any HTML file found in “frontend” to operate the system

Ensure you have Python, MySQL and the Flask dependencies installed on your system.

## Features and Functionalities

### CRUD Operations for Entities

* Product\_categories
* Add product\_Category:

Navigate to the Products page on the toolbar, click “New Product Category” [Figure 1] and fill out the required fields (only Category Name is required) [Figure 2].

Once all required fields are filled, press “Add Category”, and a new product\_category has been created.

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| A blue sign with white text  Description automatically generated (Figure 1) | A screenshot of a computer  Description automatically generated (Figure 2) |

* Products
* Add Product:

Navigate to the Products page on the toolbar, click “New Product” [Figure 3] and fill out the required fields (all fields) [Figure 4].

* + “Product Name” and “Description” accept all values.
  + “Quantity in Stock” and “Reorder Level”: Only accepts whole numbers.
  + “Unit Price” accepts whole numbers and decimal points.
  + “Category” auto-populates based on existing values.

Once all required fields are filled, press “Add Product”, and a new product will be created.

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| (Figure 3) | A screenshot of a computer  Description automatically generated (Figure 4) |

* Update Product:

Navigate to the Products page on the toolbar, click “Update Product” [Figure 5] and fill out the required fields (all fields) [Figure 6].

* “Product” and “Category” auto-populate based on existing values.
* “Product Name” and “Description” accept all values.
* “Quantity in Stock” and “Reorder Level”: Only accepts whole numbers.
* “Unit Price” accepts whole numbers and decimal points.

Once all required fields are filled, press “Update Product”, and the existing product will be updated.

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| (Figure 5) | A screenshot of a computer  Description automatically generated (Figure 6) |

* Delete Product:

Navigate to the Products page on the toolbar, click “Delete” [Figure 7] for the record.

It will prompt to ask, “Are you sure?”, press “OK” [Figure 8] and the record will be deleted.

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| A screenshot of a computer  Description automatically generated (Figure 7) | A screenshot of a computer  Description automatically generated (Figure 8) |

* Orders
* Add Order:

Navigate to the Orders page on the toolbar, click “Create Order” [Figure 9] and fill out the required fields (all fields) [Figure 10].

* + “Customer ID” and “Quantity” accept only whole numbers.
  + “Shipping Address”: accepts all values.
  + “Order Status”, “Payment Status” and Product” auto-populate based on existing values.
  + Select product(s) to add to the order and how many of each item, click “Add Item”.
  + The total Amount will automatically calculate based on the product(s) and quantity

Once all required fields are filled, press “Create Order”, and a new order will be created.

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* Update Order:

Navigate to the Orders page on the toolbar, click “Update Product” [Figure 11] and fill out the required fields (all fields) [Figure 12].

* “Order ID”, “Order Status”, “Payment Status” and Product” auto-populate based on existing values.
* “Customer ID” and “Quantity” accept only whole numbers.
* “Shipping Address”: accepts all values.
* Select product(s) to add to the order and how many of each item, click “Add Item”.
* The Total Amount will automatically calculate based on the product(s) and quantity

Once all required fields are filled, press “Update Product”, and the existing product will be updated.

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| (Figure 11) | A screenshot of a computer screen  Description automatically generated (Figure 12) |

* Delete Order:

Navigate to the Order page on the toolbar, click “Delete” [Figure 13] for the record.

It will prompt to ask, “Are you sure?”, press “OK” [Figure 14] and the record will be deleted.

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| A screenshot of a computer  Description automatically generated (Figure 13) | A screenshot of a computer  Description automatically generated (Figure 14) |

* Reports
* Add Report:

Navigate to the Products page on the toolbar, click “New Product” [Figure 15] and fill out the required fields (all fields) [Figure 16].

* + “Report Type” accepts all values.
  + “Generated By” auto-populates based on existing values.
  + “Report Data” required the input to be in the form of a JSON (e.g. {"low\_stock\_items": 7, "out\_of\_stock\_items": 1}).

Once all required fields are filled, press “Add Report”, and a new report will be created.

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| A blue rectangle with white text  Description automatically generated (Figure 15) | A screenshot of a report  Description automatically generated (Figure 16) |

* Delete Report:

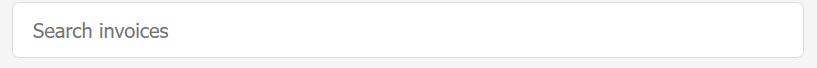
Navigate to the Reports page on the toolbar, click “Delete” [Figure 17] for the record.

It will prompt to ask, “Are you sure?”, press “OK” [Figure 18] and the record will be deleted.

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| A screenshot of a computer  Description automatically generated (Figure 17) | A screenshot of a computer  Description automatically generated (Figure 18) |

### Search Bar

All pages except for Dashboard have a search bar, which allows users to search for specific details for all records on that page.

 (Figure 19)

### Reading of records

All pages will automatically display relevant records on the page, and if there are any updates (CRUD), they will be reflected on the page itself.

### Low stock alerts

If there is a product where “Stock Quantity“ is lower than “Reorder Level”, it will display underneath “Inventory Alerts”.

A close-up of a white background

Description automatically generated (Figure 20)

## Error Handling and Troubleshooting

### Error Handling

Fields where it is a required value and is missing when trying to execute the action will display the following message [Figure 21], and you will be prompted to enter a value in the missing field.

A screenshot of a report

Description automatically generated (Figure 21)

If the field requires a specific input format, it will alert you by displaying a pop-up [Figure 22] or on the form itself [Figure 23], and you will need to enter a valid value.

A screen shot of a computer

Description automatically generated (Figure 22)

A screenshot of a computer

Description automatically generated (Figure 23)

### Troubleshooting

If you see an error message, [Figure 24] the page is blank [Figure 25], or a pre-populated field is empty [Figure 26]. Make sure that the application and Mysql server are running (as described [here](#_Getting_Started))

A white background with red text

Description automatically generated (Figure 24)

A screenshot of a computer

Description automatically generated (Figure 25)

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Description automatically generated (Figure 26)

## Support and Contact Information

For support with any issues not mentioned here or questions, I can be contacted at:

Email: anung01@student.bbk.ac.uk