Quick & Friendly Installation Guide

Prerequisites

Make sure you have:

- **Python 3.9+** installed
- **MySQL Workbench** server up and running
- An **internal/external camera** (for QR-code scanning)
- Optional: **RFID reader** (if you'll use RFID login)

1. Get the Code

1. Open a terminal (Command Prompt / PowerShell on Windows).
2. Clone the repo (or unzip a downloaded ZIP):
   - https://github.com/ezzzzz1234/Borrowing_System.py.git

2. Set Up Python

a. Create a virtual environment:
   - python3 -m venv .venv # macOS/Linux
   - python -m venv .venv # Windows

b. Activate it:
   - **macOS/Linux**: source .venv/bin/activate
   - **Windows**: .\.venv\Scripts\Activate.ps1

c. Install dependencies:
   - pip install -r requirements.txt

3. Prepare the Database

a. Log into MySQL Workbench
b. Create the database:
   - CREATE DATABASE equipment_borrowing;

c. Run the table-creation script (copy & paste into the MySQL prompt):

```
USE equipment_borrowing;

CREATE TABLE users (
  user_id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100),
  email VARCHAR(100) UNIQUE,
  password_hash VARCHAR(255),
  rfid VARCHAR(50) UNIQUE,
  role ENUM('admin','staff','student')
);

CREATE TABLE equipment (
  equipment_id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100),
  description TEXT,
  total_qty INT,
  available_qty INT,
  qr_code VARCHAR(20) UNIQUE
);

CREATE TABLE inventory_log (
  log_id INT AUTO_INCREMENT PRIMARY KEY,
  equipment_id INT,
  quantity_change INT,
  action VARCHAR(20),
  user_id INT,
  timestamp DATETIME DEFAULT CURRENT_TIMESTAMP
);

CREATE TABLE borrow_requests (
  request_id INT AUTO_INCREMENT PRIMARY KEY,
  user_id INT,
  status ENUM('confirmed','cancelled'),
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP
);

CREATE TABLE borrow_items (
  item_id INT AUTO_INCREMENT PRIMARY KEY,
  request_id INT,
  equipment_id INT,
  quantity INT
);
```

```
CREATE TABLE borrow_history (
  history_id INT AUTO_INCREMENT PRIMARY KEY,
  request_id INT,
  action ENUM('borrow','return'),
  performed_at DATETIME DEFAULT CURRENT_TIMESTAMP
);
```

d. In **Borrowing_System.py**, update DB_CONFIG with your MySQL username/password.

4. Add Assets

- Put your **logo image** (ump.jpg) in the project root.
- Create a folder called docs/ and drop in your two PDFs:
    - docs/
        - installation_guide.pdf
        - user_manual.pdf

5. Run the App

In your project folder, run:

- streamlit run **Borrowing_System.py**

6. First-Time Setup & Login

a. **Create your Admin account** when prompted (name, email, RFID, password).

b. After that, log in as Admin/Staff or Student (via email/password or RFID).

Troubleshooting Tips

- If you see **"module not found"**, make sure your .venv is activated and you ran pip install -r requirements.txt.
- If you can't connect to MySQL, double-check your DB_CONFIG settings and that the server is running on port 3306.