

Tamkang University
Department of Computer Science and Information Engineering



Open Source Practice

Final Project Demonstration

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1. Demo Scenario Overview

- **What specific features will you present? [high-level descriptions]**
 - **Login page** (without registration)
Authorize the user to try to log in to the website.
 - **Dashboard**
A place for the user to keep track of the inventory. The user can add, remove, and edit an item, as well as its description and quantity.
 - **Picture Description**
A function that enables the user to upload a picture to give a better description.
 - **Search Function**
A function that gives a user the ability to look for a specific item by its name.
 - **Category Function**
Users can add a custom tag to an item. This tag can be added to other items to group them.
 - **Expiration Date Function**
A notification table that keeps track or reminds the user if an item has an expiration date.

All of the above functions will interact with the MariaDB Database

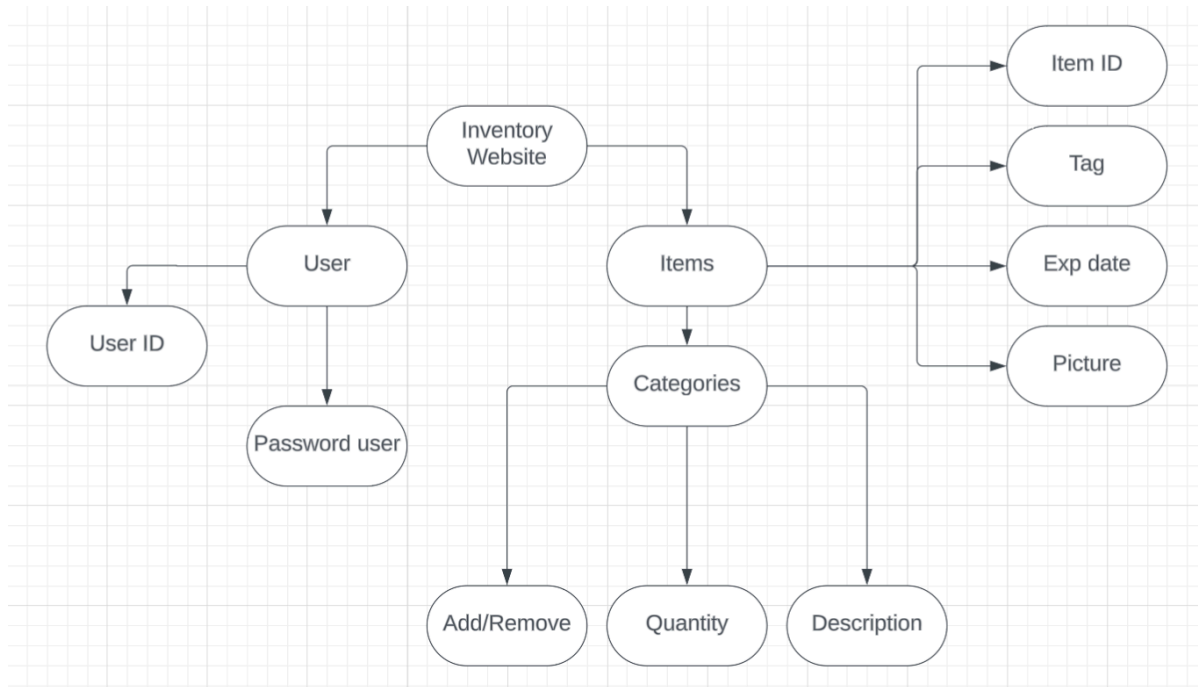
- **What user actions will be shown? [the triggers of the functional flows]**
 - Entering a username and password to log in
 - Navigating to the Dashboard
 - Submitting an item (name, quantity, picture, tag, expiration date)
 - Searching for an item by name
 - Editing an item's information
 - Deleting an item
- **What parts of the application will be functional (even if other parts are not yet finished)? [the functional flows, may include some pseudo implementations]**
 - Login page that only allows one user.
 - Adding an item to the MariaDB Database
 - Inventory Dashboard that reads from the Database
 - Editing or Deleting the items using a query string

2. Planned URL Endpoints

URL Path	Method	HTTP Var.	Session Var.	DB Op.
/login.php	POST	User, Password	Sets \$_SESSION['user']	SELECT from users
/dashboard.php	GET	-	Requires \$_SESSION['user']	-
/add_item.php	POST	Item_name, quantity, location	Requires \$_SESSION['user']	INSERT into items
/item.php	GET	-	Requires \$_SESSION['user']	SELECT * from items
/edit_item.php	GET & POST		Requires \$_SESSION['user']	SELECT, then UPDATE on items
/remove_item. php	GET		Requires \$_SESSION['user']	DELETE from items
/logout.php	GET		Destroy session	-

3. Database Design

a. Entity-Relationship Diagram (ERD)



b. Relational Model

user	item
User_id VARCHAR(100) (PK)	Item ID INT (PK)
Password VARCHAR(100)	Add/remove BOOL
	Item_quantity INT
	Picture BLOB
	Description VARCHAR(500)
	Categories VARCHAR(100)
	Exp date TIMESNAP
	Tag VARCHAR(100)

c. Normalization

- Each entity has attributes that depend only on its primary key
- There are no transitive dependencies
- The design avoids redundancy and update anomalies
- Therefore it meets 3NF