ERP System

Team Members:

Adam Mohamed

Youssef Ebrahim

Afnan Sayed

Heba Gad

Terevena Reda

Contents

1. Project Scope

2. Stakeholder Analysis

Intended Audience The audience for this document is divided into three main groups, each with a different focus:

- **1. Management & Stakeholders**

  - **Business Owners / Executives:** To review and approve the overall project scope, high-level business rules, and reporting capabilities to ensure the system will deliver the intended business value (and ROI).

- **2. Core Operational Users (The "How")**

  - **Finance & Accounting Team (e.g., Accountants, AP/AR Clerks):** As the primary daily users, they will review this document to confirm that all financial processes, calculations, data entry forms, and regulatory requirements are accurately captured.

  - **Inventory/Supply Chain Managers:** To verify workflows for purchasing, stock management, order fulfillment, and supplier tracking.

- **3. The Technical Team (The "Build" and "Test")**

  - **Project Manager:** To define the project's scope, manage change requests, and track progress against these defined requirements.

  - **Software Developers & Architects:** To understand the functional and non-functional requirements (like performance, security, and scalability) needed to design and build the system.

3. Project Planning

Task	Task ID	Depends on	Deliverables	Assignee
User Management	1	-	Src Code	Afnan
Suppliers Management	2	1	Src Code	Afnan
Customers Management	3	1		Afnan
Accounting Management	4	1	Src Code	Youssef
Product Management	5	1	Src Code	Adam
Warehouse Management	6	1,5	Src Code	Adam
Inventory Adjustment Management	7	1,5,6	Src Code	Adam
Financial Management	8	1,2,3,4	Src Code	Youssef
Purchasing Management	9	1,2,5,6,8	Src Code	Heba
Sales Management	10	1,3,5,6,8	Src Code	Heba
Reports Management	11	1,3,4,5,6,10	Src Code	Afnan
Frontend	13	-	Src Code	Terevena
Stakeholders Analysis	14	-	Doc	Adam
Functional Requirements	15	-	Doc	Adam & Afnan
Database Design (ERD)	16	15	ERD	Youssef
UI/UX Design	17	15	Screens	Terevena

4. Functional Requirements - features and functionalities.

1. User Management

- login: role based access control, uses email + password

- forgot password → ask admin

- only admins can create accounts

- managers can mark new users as manager or accountant, *(don't know if different roles exist)* with different permission levels per account
- admin permissions: admins can view and edit all user profiles but cannot change user roles, only manage privileges

2. Suppliers And Customers

- admins can view lists of both suppliers and customers

- each list shows name, account (statement), email, tax number, and address

- supplier fields (name, phone are required, others optional)
- suppliers module: adding new supplier
- enter the supplier's name, phone number (both are mandatory), email address, balance of the first period, type of balance, tax number and address (the rest are optional).

- customers module: adding new customer
- enter the customer's name, phone number (both are mandatory), email address, balance of the first period, type of balance, tax number and address (the rest are optional).
- admin can view the customer list
- for each customer:

    view account statement showing customer id, name, statement date

    print the account statement

    account statements show all related transactions (sales, purchases, returns) with dates and descriptions

5. **Account Statements** (كشف الحساب)

- admins can view account statements for both suppliers and customers

- each statement should display bills, dues (المستحقات), and transaction dates

6. **Financial Management**

5.1 payment permission

- payments are made from a cash safe (خزنة), *the system must verify that the selected safe has enough balance before processing*

- there can be multiple safes, including main and sub-safes

- each safe shows:

  - opening balance

  - current balance

  - details of all transactions

- admins can edit a safe's name and opening balance

- to create a payment permission, the user must:

  - select a reference type

  - choose the party (from suppliers or customers)

  - optionally enter a description

  - choose the safe from which the payment will be made

- displays all completed payment transactions that were created using payment permits

fields: id, cost, date, type, and user

5.2 receipt permission (إذن استلام)

- the user must select a reference type, which can be one of the following:

1. with a party (مع طرف) → choose from the list of suppliers/customers

2. expense (مصروف) → choose from a list (gas, electricity, rent, ..)

- revenue source (مصدر ربح) → choose from a list of predefined income sources (to be defined later)

- displays all completed receipt transactions that were created using receipt permits

fields: id, cost, date, type, and user

7. **Sales Management (ادارة المبيعات)**

- admins can view the invoice history and open any invoice for details

- when creating an invoice:

  o enter customer name

  o invoice number is generated automatically

  o enter invoice date manually

  o add product(s) each with:

    ▪ auto generated product code

    ▪ quantity

    ▪ unit count

    ▪ selling price

- total (auto-calculated)
    - admin can add multiple products to the same invoice
- each product can have multiple variations ("biscuit" → chocolate flavor, cream flavor, ..)
- same invoice logic as purchasing à automatic fields (total, net, balances)
- cannot sell more than available stock (inventory validation)
- "amount received field" (partial prepayment)
- sales affect average selling price and inventory quantities
- sales return creation (without invoice) and sales return list
- print invoice option

8. **Inventory Management** (المخازن)

- admin can add new products (product registration):
    - each has a base product, category, and optional description
- after adding a base product, the admin can define:
    - type, flavor, and size (*to be confirmed whether these are shared across all categories?*)
    - package type, purchase price, selling price, and unit factor (quantity per package)
    - barcode, if not entered, it should be auto generated.
- admin can:
    - add new package types (name + optional description)
    - view full product details.
    - edit product information and add or modify packages
- functionality of barcode search for packages
- search functionality for products and packages
- the price should be calculated per measurement unit not package

9. **Purchasing Management (ادارة المشتريات)**

- the system should support creating both purchase and sales invoices

- supplier invoice number is auto generated

- automatic field calculations:

  total amount, net amount (المبلغ الصافي)

  balance before/after invoice

  optional discount and partial payment fields

- concept of payment order amount:

  the system shall include an optional field named payment order amount within the purchase invoice form

- this field allows the user to record a partial payment made to the supplier at the time of creating the invoice

- the amount entered in this field must not be counted as part of the invoice total, as it represents money paid in advance and should be treated separately from the invoice balance

- the system shall automatically update the inventory records whenever a purchase is created

  the system shall recalculate the average purchase price of each product based on the new purchase data

  the system shall also increase the product quantity in stock according to the quantity specified in the purchase invoice

- print invoice functionality

10. **Package Types**

- admin can:
    - view all existing package types

- o see the number of products using each type

- o edit or delete package types

11. Product Codes And Variations

- each product has multiple variations

- product codes are generated as follows:
example:

  - o base product: prod0001

  - o variations:

    - prod0001_var01 → biscuit with salt

    - prod0001_var02 → biscuit with cheese

12. Returns Management

- admin can create a return similar to how invoices are created

- the only difference is that there's no return number (unlike invoice numbers)

- purchase return creation (without invoice) functionality

- purchase returns list with columns: (id, supplier, date, amount)

13. Stock Adjustment Management (تسوية المخزون)

- admin can create stock adjustments by entering:

  - o adjustment type

  - o product

  - o old quantity and current quantity

  - o the system automatically calculates the difference and determines the impact type

- o   date is auto generated when the adjustment is created

- admin can add multiple products in one adjustment

- there's also a list view of all stock adjustments showing:

  - o   type(increase, decrease, opening credit)

  - o   date

  - o   user who created it

  - o   adjustment reason (to be defined, possibly entered during adjustment creation)

  - o   number of items and total value

- search and filter features in adjustments list
- specific fields to display (id, type, date, user, reason, product count, total effect, view details)

14. Reports

- the system will support multiple types of reports

earnings by invoice (with search)
earnings by customer
earnings by product
inventory movement (حركة المخزون)

- users can search within reports

- total suppliers report: shows each supplier, balance, total payable/receivable

- total customers report showing total balances and amounts to collect/pay

15. Finances Module (ماليات)

- treasury account statement: detailed table structure + metadata (treasury name, current balance)

- direction (incoming/outgoing) and reference table/record ids in the account statement

5. Database Design
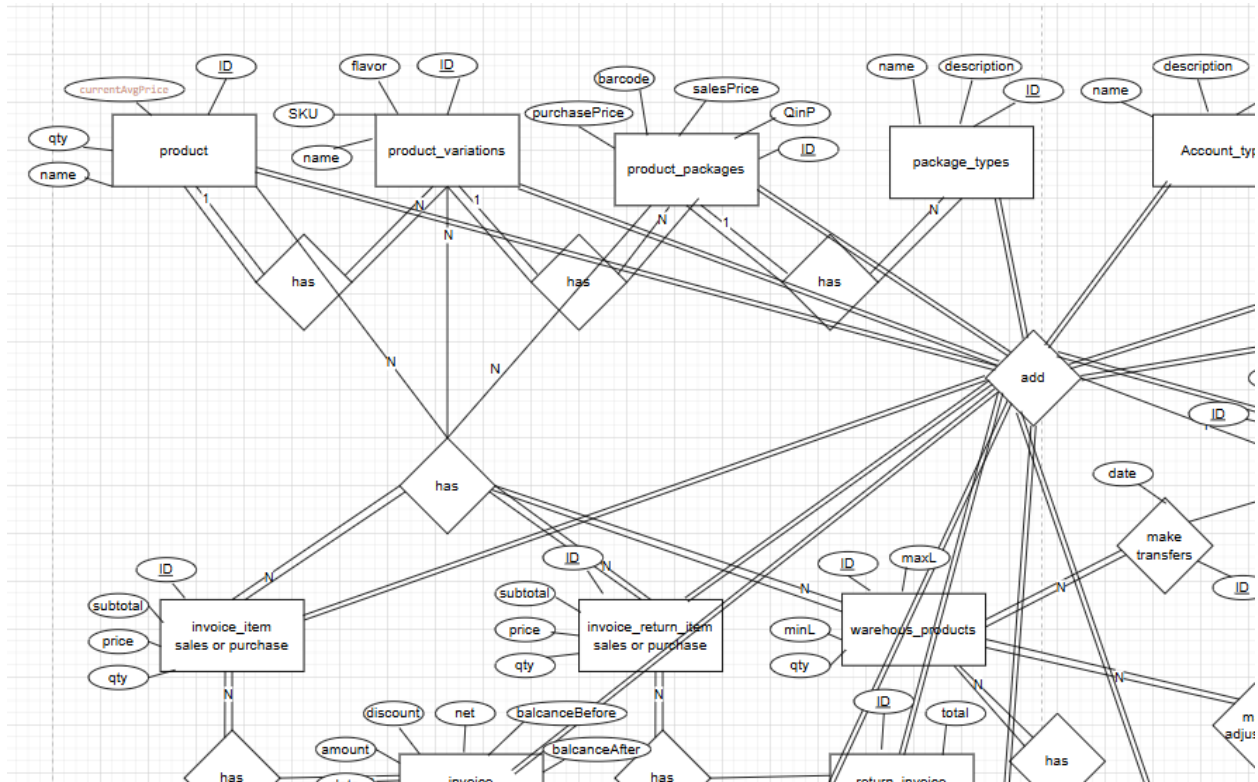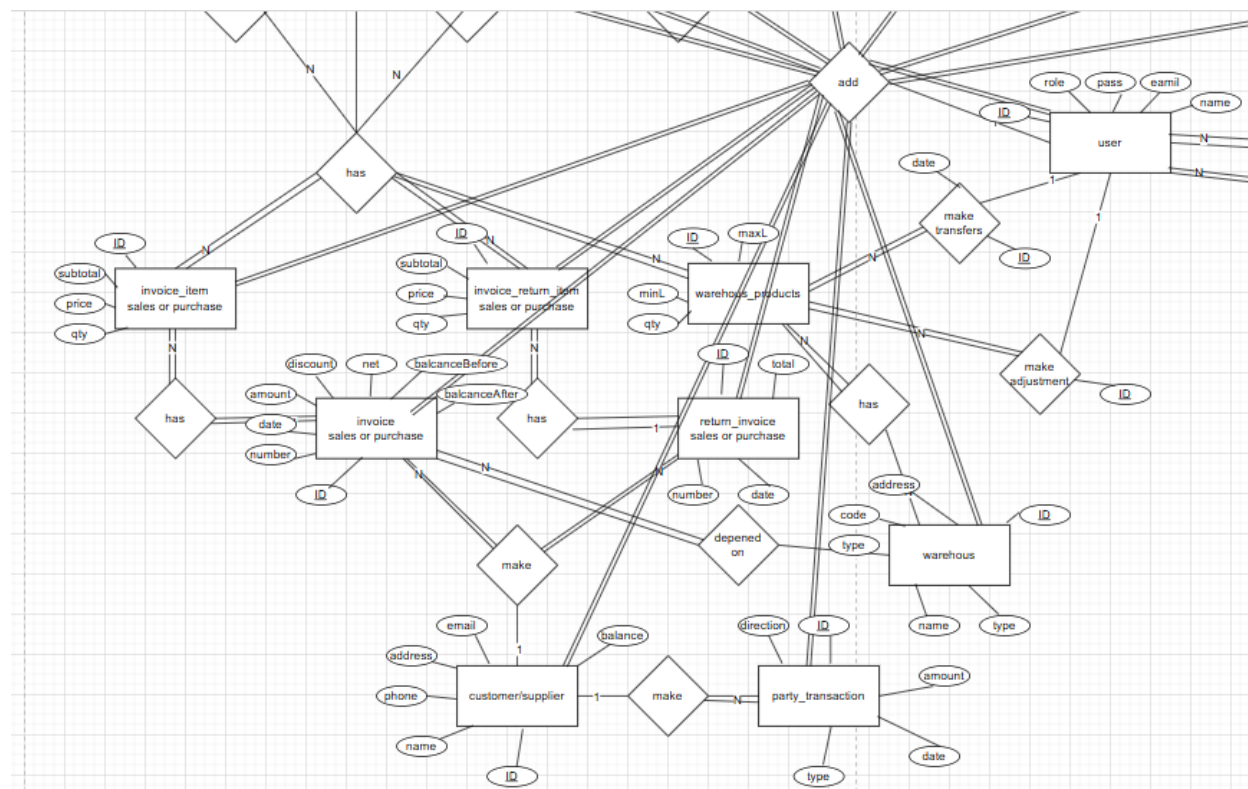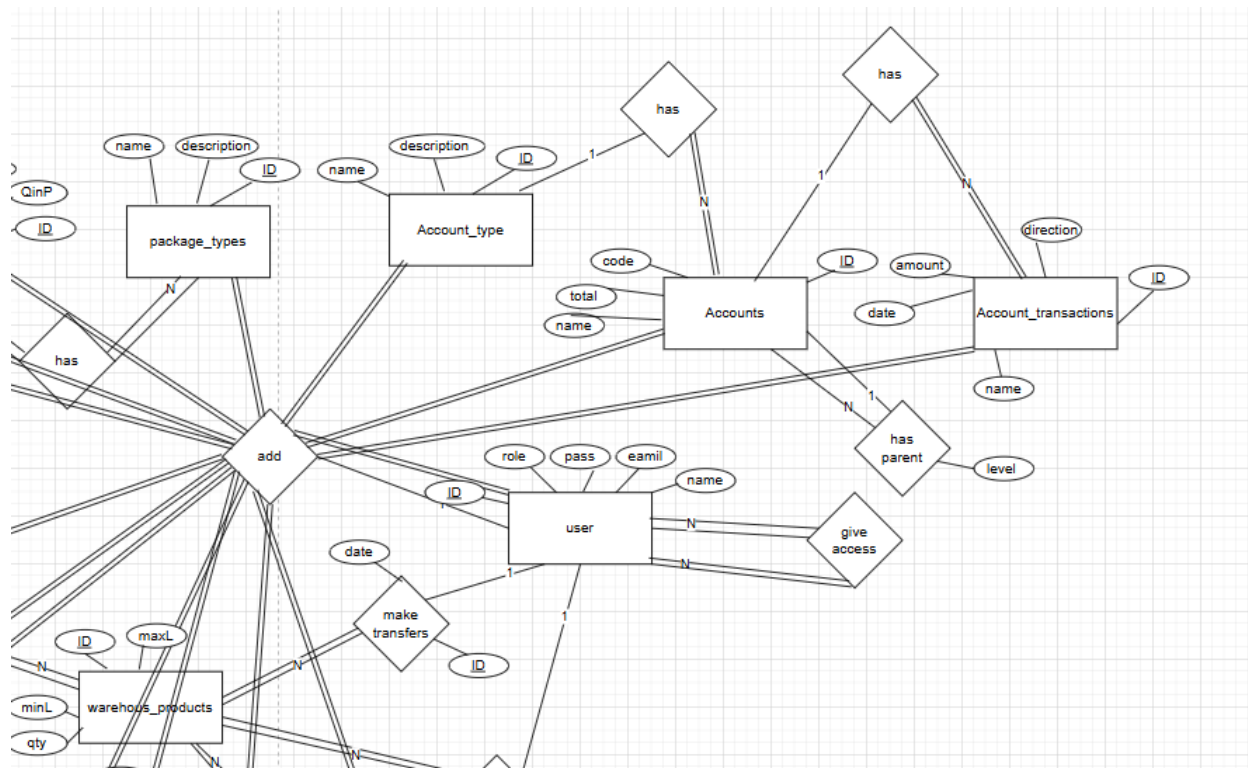
6. UI/UX Design

1) Home Page:
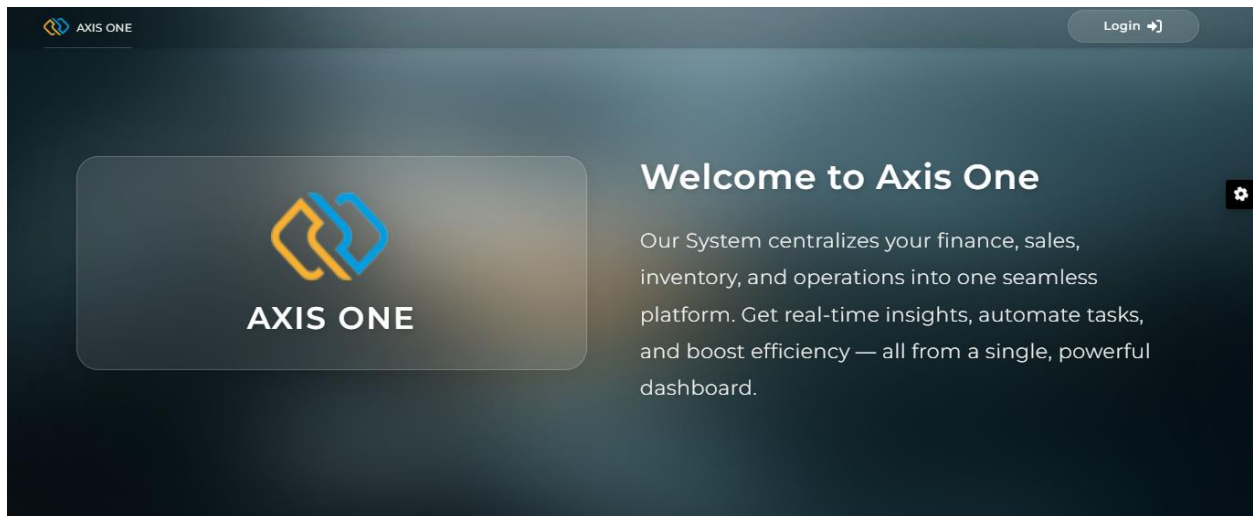
2) Sign In Page:
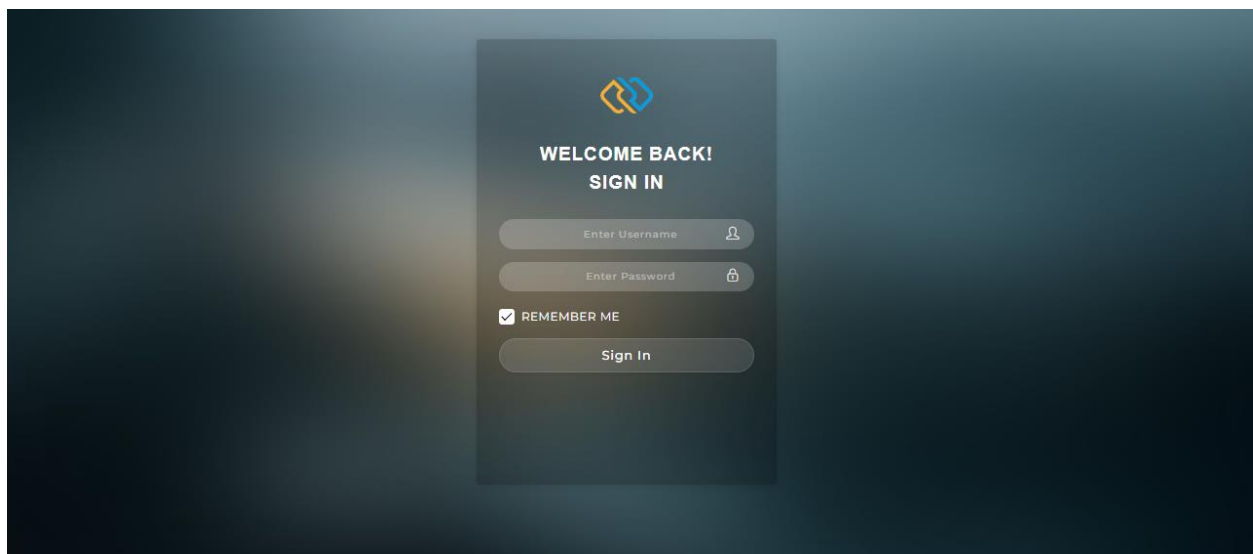
3) Add Product Page:

Add New Product

NAME *

[Enter Product Name]

DESCRIPTION

[Enter Description]

CATEGORY

[⌄]

[Submit]

4) Products List:

Products List   [+ Add Product]

#	NAME	DESCRIPTION	TYPES	ACTIONS
1	Wireless Mouse	Ergonomic wireless mouse	Electronics	👁 🗑 ✎
2	Office Chair	Comfortable chair	Furniture	👁 🗑 ✎
3	Notebook	200-page ruled notebook	Stationery	👁 🗑 ✎
4	LED Monitor 24"	Full HD LED monitor	Electronics	👁 🗑 ✎
4	Stapler	Standard office stapler	Stationery	👁 🗑 ✎

5) Add Packaging:

6) Clients List:

7) Suppliers List:

Suppliers List

#	NAME	PHONE NUMBER	EMAIL	TAX NUMBER	ADDRESS	ACTIONS
1	Mark	Otto	@mdo	huhfue	hguyguefioj	👁 📄 ✏
2	Jacob	Thornton	@fat	huhfue	hguyguefioj	👁 📄 ✏
3	Larry	the Bird	@twitter	huhfue	hguyguefioj	👁 📄 ✏
4	tery	the Bird	@twitter	huhfue	hguyguefioj	👁 📄 ✏

+ Add Supplier

8) Account Statement:

Secure Account Statement

Opening Balance: 1,000,000.00 EGP (Cash in Hand)

Current Balance: 961,160.00 EGP (Cash in Hand)

#	DATE	DESCRIPTION	DEBIT AMOUNT	CREDIT AMOUNT	BALANCE AFTER TRANSACTION	REFERENCE TABLE	REFEREN
1	2025-11-01	Payment Received	0.00	500.00	500.00	Invoices	INV-001
2	2025-11-03	Office Supplies Purchase	150.00	0.00	350.00	Expenses	EXP-045
3	2025-11-05	Client Refund	200.00	0.00	150.00	Refunds	RFND-01
4	2025-11-07	Service Income	0.00	400.00	550.00	Invoices	INV-002
5	2025-11-10	Bank Charges	25.00	0.00	525.00	Bank	BNK-007