`

AL-HUSSEIN TECHNICAL UNIVERSITY

Company's sales by region at Jordan

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A special thanks to our beloved family members and our friends for their unconditional support, encouragement, and inspiration, and for every person who stands for us and to support our project.

Acknowledgments

“In The Name of ALLAH, The Most Gracious, The Most Merciful”.

“ALLAH Will Raise Those Who Believe From Among You and Those Whom Knowledge is Given to Degrees of Rank. And ALLAH is Well-Aware of What You Do.” Qur’an

Would not have been possible without the help and support of so many individuals around the world. I must start with my parents, who instilled in me from a young age a love of learning and exploring the world around me. They always encouraged me in all my career pursuits.

This report endeavors to analyze the learnings and experiences of my three months internship period.

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They are a great teacher and they are very professional like their style of teaching always ready to correct you very flexible in everything that I asked of their they explained everything very calmly

their lessons are really interesting. They has made a pleasant impression they are friendly and tries to make the class enjoyable.

Abstraction

A store inside King Abdullah Business Park. It is an web application Point of Sale (POS) to handle the store sales transactions and stock. There are many employees with a different role that will work on the POS. Admin can access everything pages and all CRUD functionalities, seller can access only selling dashboard and the seller can edit or delete each transaction on this list directly using action buttons. Procurement can access only Stock management page all CRUD functionalities and Accountant can only access Transactions management page only Read, Update, and Delete functionalities. surely by using username and password for each.

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Introduction

1.1 Overview

1.1.1 What is Full-Stack

A full-stack developer is a type of programmer that has a functional knowledge of all techniques, languages and systems engineering concepts required in software development. The term “full stack” refers to the technologies and skills needed to complete a project, with each individual component being a stack. Stacks can be mobile, web or software specific.

Typically, a software engineer will focus on one part of development, either the frontend or the back end. The front end includes all components associated with the visible parts of an application or website while the back end encompasses the underlying databases and infrastructure. The full stack is a hybrid of both.

1.1.2 Frontend && Backend

The design of the interfaces and the external structure in the system and the instructions related to it.

HTML

Hyper Text Markup Language (HTML) is a markup language used in creating and designing web pages and websites, and this language is one of the oldest and widely used languages in designing web pages. HTML is the structure of the web page and gives the internet browser a description of how to display its contents. It informs it that this is a headline, that paragraph, and much more. HTML uses what are known as tags to issue instructions to the browser. These tags are placed between two tags greater than “>” and less than “<”. Html used many of text editors such as visual studio code, also when storing a file HTML, its extension is as follows Filename.HTML.

CSS

Cascading Style Sheet (CSS) The method we use to give the general appearance of web pages (colors, backgrounds, font sizes, type, etc). While HTML is concerned with the structure of the page and its description of its elements, CSS is considered complementary to it as it coordinates and decorates what has been accomplished in the HTML file, it is only a format language. When storing a file CSS, its extension is as follows Filename.CSS

Java script

Java script is programing language of the web pages and its open source, we use java script to program the behavior of web pages, it is included in modern browsers and can be used easily when loading a web page, also One of the platforms that have been developed on JavaScript is React and it uses the ES6 of JavaScript.

Back end:

Related in databases, how to link, organize and retrieve data, and make the page more dynamic.

1.2 What is the PHP

What it is a PHP? PHP is Server Side Scripting Language, it developed to be open source and Widespread, Convenience to develop web application and can be written into tag HTML, and links databases and Front end .[25] Database compatibility: PHP works with MySQL. OS compatibility: can be work on any operating system. PHP files have extension ".php"

1.3 Terminal

A terminal emulator, or terminal application, is a computer program that emulates a video terminal within some other display architecture. Though typically synonymous with a shell or text terminal, the term terminal covers all remote terminals, including graphical interfaces. A terminal emulator inside a graphical user interface is often called a terminal window.

A terminal window allows the user access to a text terminal and all its applications such as command-line interfaces (CLI) and text user interface (TUI) applications. These may be running either on the same machine or on a different one via telnet, ssh, dial-up, or over a direct serial connection. On Unix-like operating systems, it is common to have one or more terminal windows connected to the local machine.

1.4 Bootstrap

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Bootstrap is an HTML, CSS and JS library that focuses on simplifying the development of informative web pages (as opposed to web applications). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to a project, Bootstrap provides basic style definitions for all HTML elements. The result is a uniform appearance for prose, tables and form elements across web browsers. In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents. For example, Bootstrap has provisioned for light- and dark-colored tables, page headings, more prominent pull quotes, and text with a highlight.

1.5 API

API is the acronym for application programming interface — a software intermediary that allows two applications to talk to each other. APIs are an accessible way to extract and share data within and across organizations.
The term “API” has been generically used to describe connectivity interfaces to an application. However, over the years, the modern API has taken on some unique characteristics that have truly transformed the technology space. First, modern APIs adhere to specific standards (typically HTTP and REST), which enable APIs to be developer-friendly, self-described, easily accessible, and understood broadly.

1.6 MySQL

MySQL is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter My, and "SQL", the acronym for Structured Query Language. A relational database organizes data into one or more data tables in which data may be related to each other; these relations help structure the data. SQL is a language programmers use to create, modify, and extract data from the relational database, as well as control user access to the database. In addition to relational databases and SQL, an RDBMS like MySQL works with an operating system to implement a relational database in a computer's storage system,

Visual Studio Code

(VS Code): Visual Studio Code is a source code editor that runs on your desktop and is available for any operating system on your computer, it supports JavaScript and Contains many extensions for other programming languages such as PHP, SQL, C, etc. It is a lightweight software.

manages users, allows for network access, and facilitates testing database integrity and creation of backups.

1.7 What is the OOP

Object-oriented programming (OOP) is a programming paradigm based on the concept of "objects", which can contain data and code. The data is in the form of fields (often known as attributes or properties), and the code is in the form of procedures (often known as methods).

A common feature of objects is that procedures (or methods) are attached to them and can access and modify the object's data fields. In this brand of OOP, there is usually a special name such as **this** or **self** used to refer to the current object. In OOP, computer programs are designed by making them out of objects that interact with one another.OOP languages are diverse, but the most popular ones are class-based, meaning that objects are instances of classes, which also determine their types.

1.8 Routing

Routing, in a narrower sense of the term, often refers to IP routing and is contrasted with bridging. IP routing assumes that network addresses are structured and that similar addresses imply proximity within the network. Structured addresses allow a single routing table entry to represent the route to a group of devices. In large networks, structured addressing (routing, in the narrow sense) outperforms unstructured addressing (bridging). Routing has become the dominant form of addressing on the Internet. Bridging is still widely used within local area networks.

1.9 CMS-MVC

A content management system (CMS) is computer software used to manage the creation and modification of digital content (content management). A CMS is typically used for enterprise content management (ECM) and web content management (WCM).

A CMS typically has two major components: a content management application (CMA), as the front-end user interface that allows a user, even with limited expertise, to add, modify, and remove content from a website without the intervention of a webmaster; and a content delivery application (CDA), that compiles the content and updates the website.

Model–view–controller (MVC) is a software architectural pattern commonly used for developing user interfaces that divide the related program logic into three interconnected elements. This is done to separate internal representations of information from the ways information is presented to and accepted from the user.

Traditionally used for desktop graphical user interfaces (GUIs), this pattern became popular for designing web applications. Popular programming languages have MVC frameworks that facilitate the implementation of the pattern.

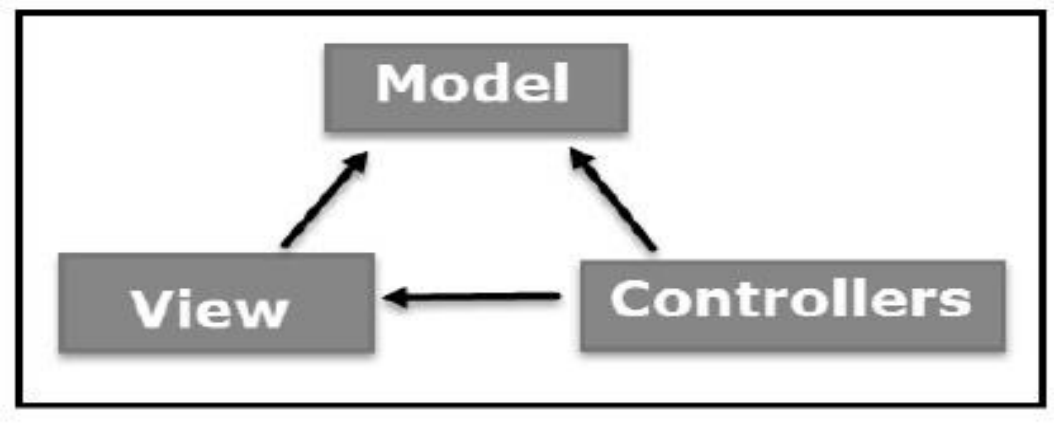

Figure 1.1 Model–view–controller (MVC)

Model

The Model component corresponds to all the data-related logic that the user works with. This can represent either the data that is being transferred between the View and Controller components or any other business logic-related data. For example, a Customer object will retrieve the customer information from the database, manipulate it and update it data back to the database or use it to render data.

View

The View component is used for all the UI logic of the application. For example, the Customer view will include all the UI components such as text boxes, dropdowns, etc. that the final user interacts with.

Controller

Controllers act as an interface between Model and View components to process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output. For example, the Customer controller will handle all the interactions and inputs from the Customer View and update the database using the Customer Model. The same controller will be used to view the Customer data.

2. Requirements

The first page, login page contains username and password serves as the home page, this page will redirect the user to the dashboard.

The second page, Selling dashboard this dashboard contains selling form with item name and item quantity. The seller can't sell items that is out of stock.

The third page, Stock management page should list all items and provide all CRUD functionalities (through subpages) for each item.

The fourth page, Transactions management page should list all transactions and provide only Read, Update, and Delete functionalities (through subpages) for each transaction

The five page, Users' management page should list all users and provide all CRUD functionalities (through subpages) for each user. Each user should have display name, username, password, email, role, created on, and updated on.

3. Methodology

In this project, I created pages in PHP and connected them to a database that was created and named it point-of-sale in phpMyAdmin to store the data inside.

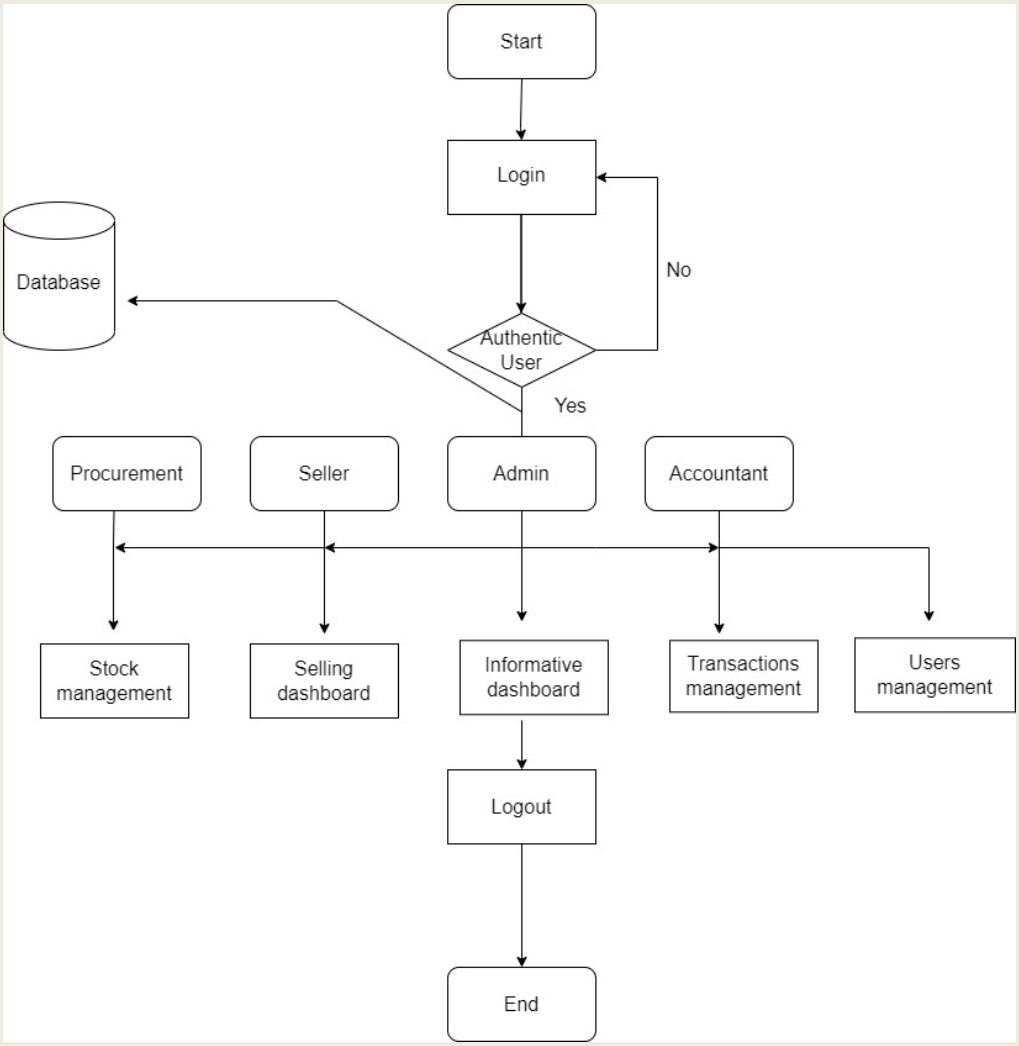

Figure 1.2 Workflow

Front-End: HTML, CSS , Bootstrap.
Back-End: PHP, SQL.

4.Project Interfaces and their Description

The following figures shows website interface with description for each one. The description represents the functionality of each interface, and how it interact with other interfaces to end up with fully functional web.

Login Page

allows the user to interact with the system

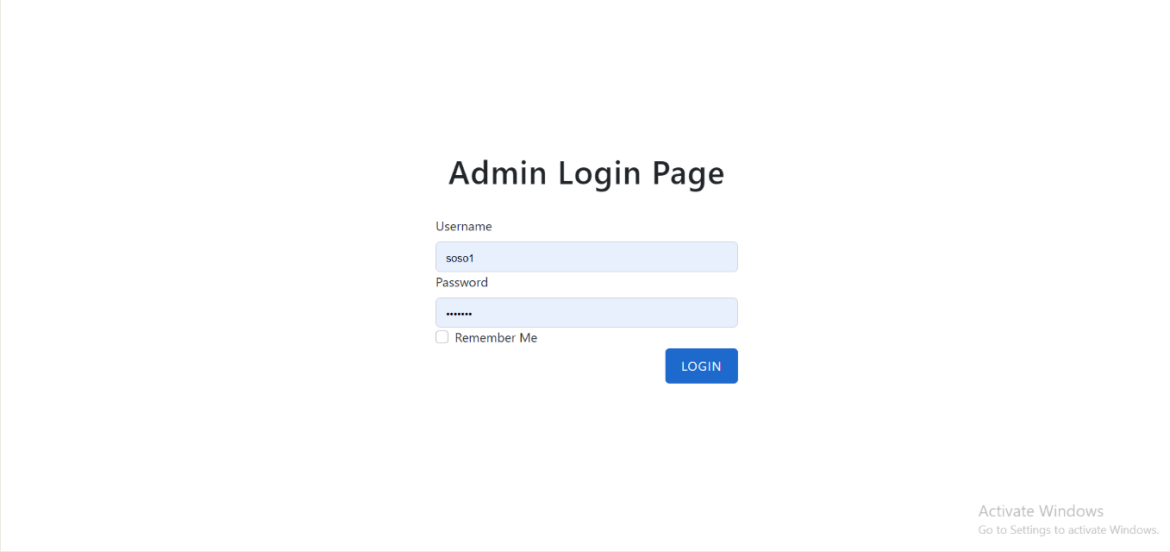

Figure 1.3 login page

Main Page

It appears for Admin visit the site it shows many components.

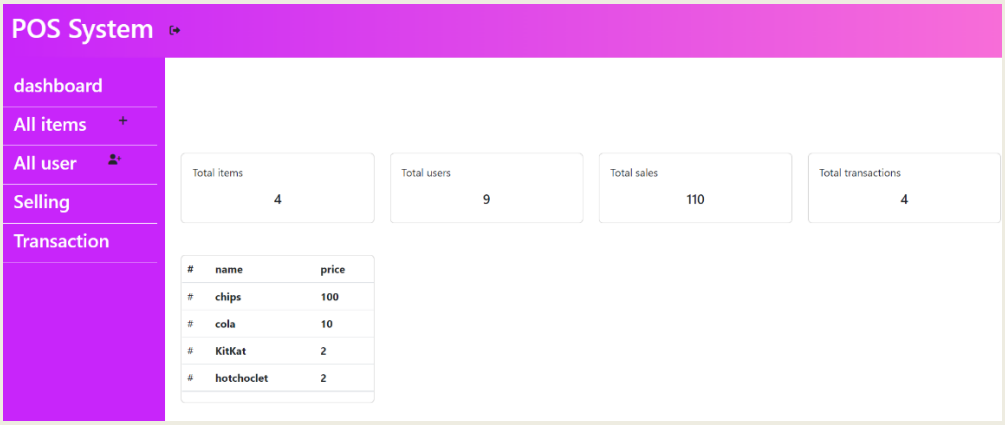

Figure 1.4 main page

button

When login, a list of pages appears in page

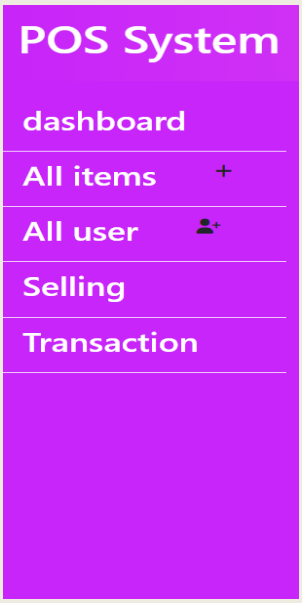

Figure 1.5 Buttons

List of items

To check on items by CRUD functionalities

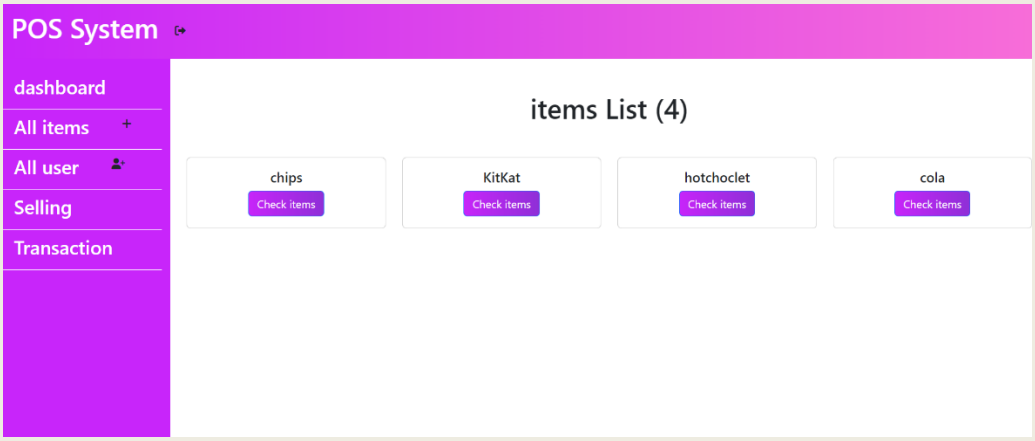

Figure 1.6 stock page

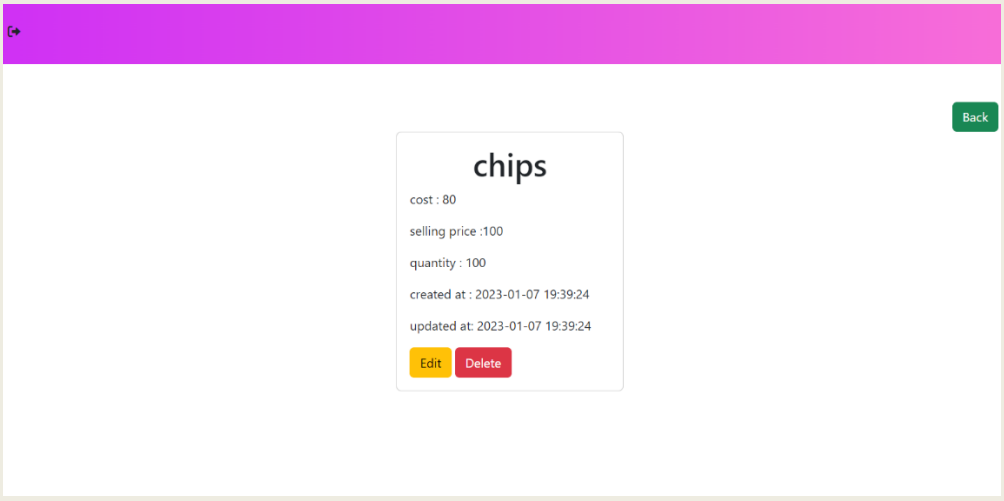

Figure 1.7 check item

List of users

To check on users by CRUD functionalities.

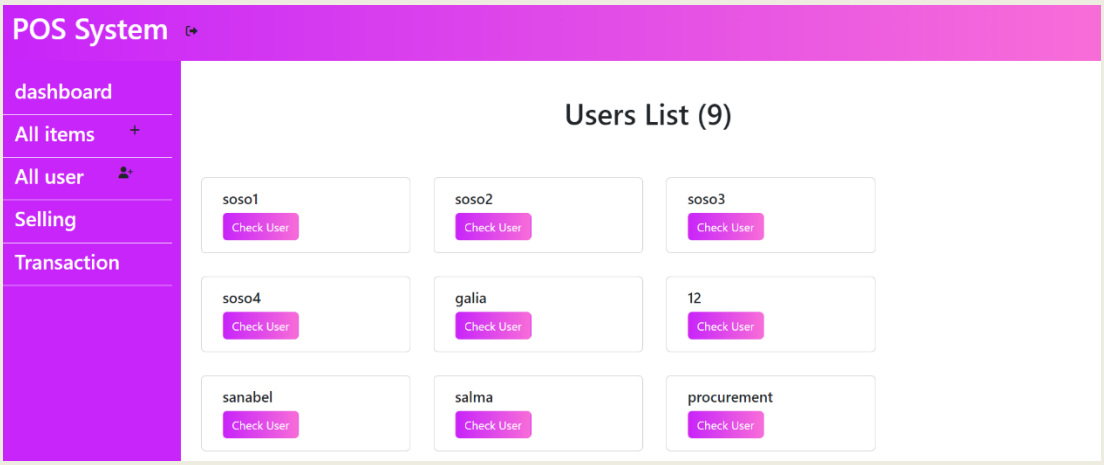

Figure 1.8 user page

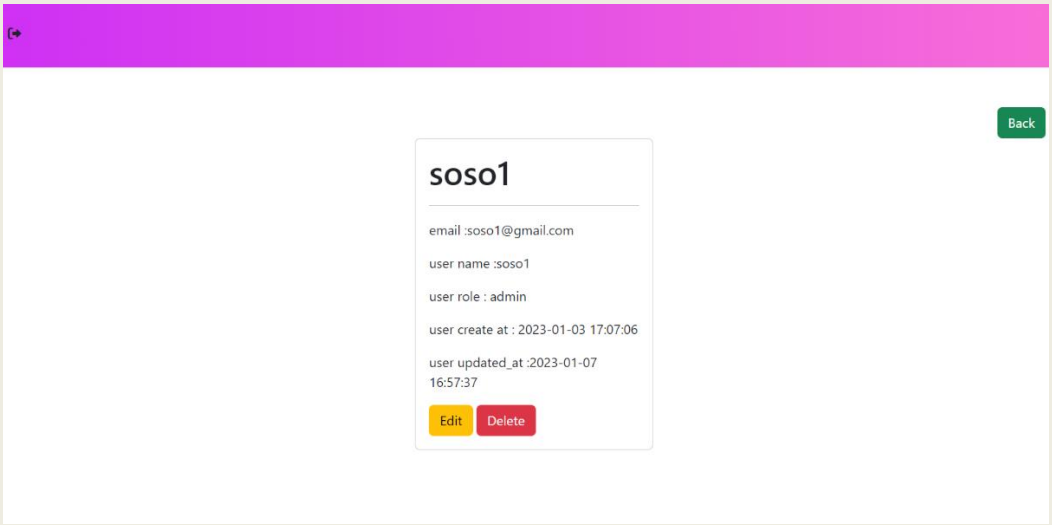

Figure 1.9 check user

shopping dashboard

this dashboard contains selling form with item name and item quantity. The seller can't sell items that is out of stock.

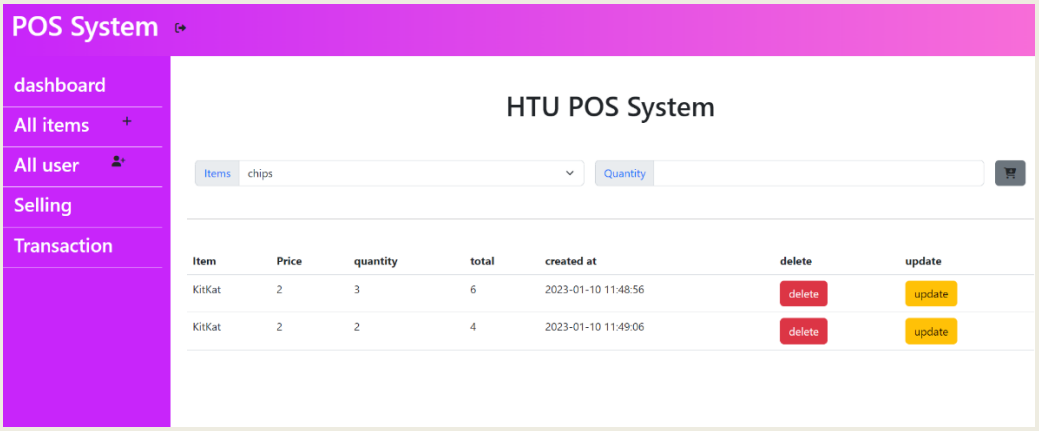

Figure 1.10 selling page

Shows all transaction report

To check on transactions by CRUD functionalities.

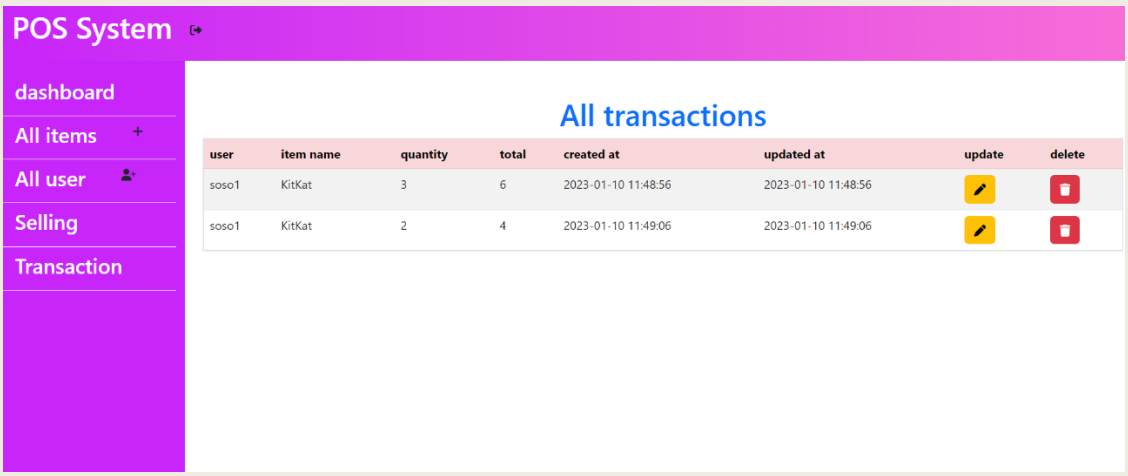

Figure 1.11 transactions page

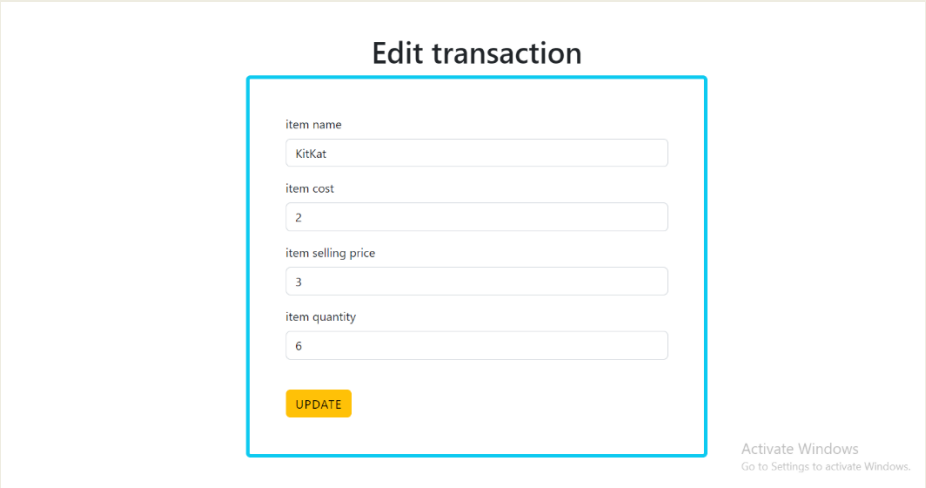

Figure 1.12 edit transaction

Create user information page

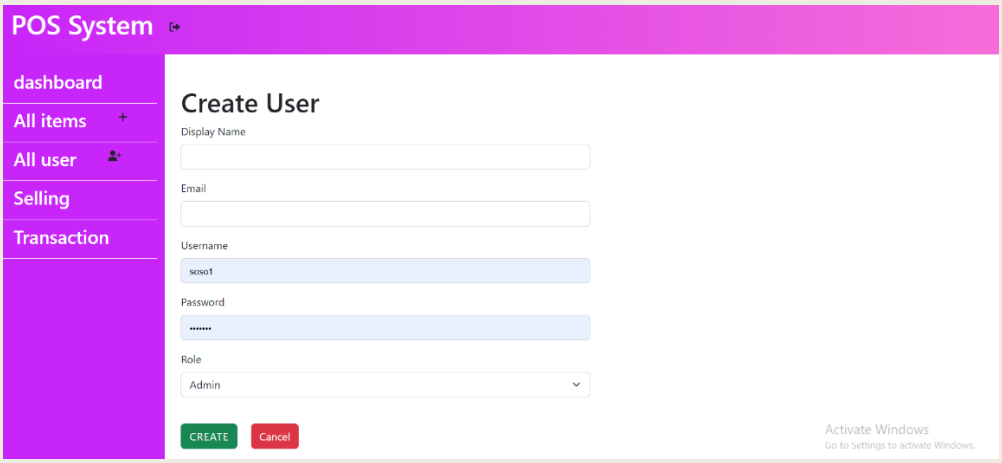

Figure 1.13 create user

Create item information page

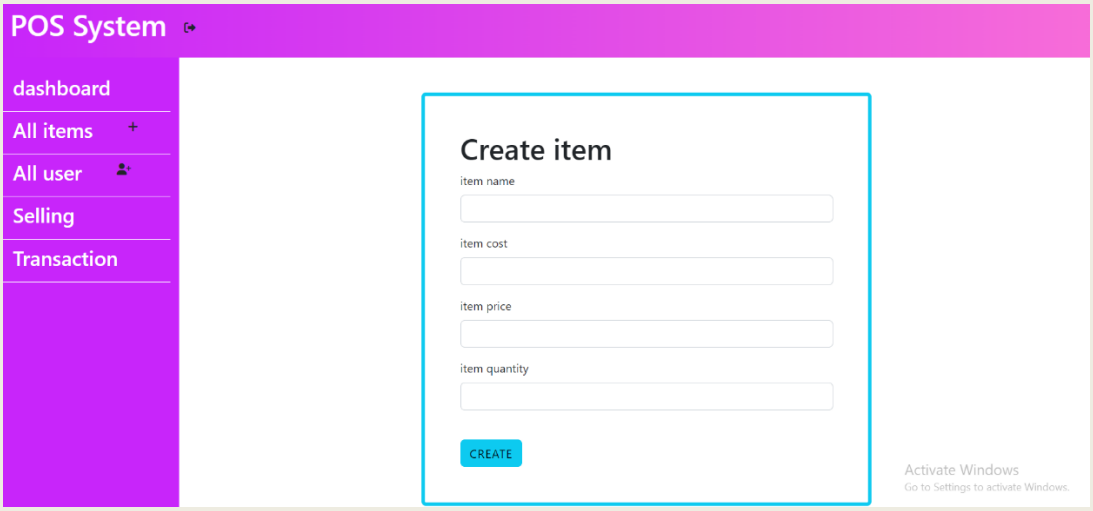

Figure 1.14 create item

4. Conclusion

The POS has become an integral part of electronic business. It is a wide and inspiring field to work in and set up projects in this field, which are often successful because they fulfill the needs of individuals and companies at this time. Many goals have been achieved, such as the user's ability to review all transactions and purchase, delete or modify the item. Despite all this, and due to lack of time, I was not able to achieve all the goals.

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