



# Sportify – Sports Store Management System

Sportify is a modern, web-based Sports Store Management System developed to digitize and automate the daily operations of a sports equipment retail shop. The system replaces traditional manual record-keeping with a centralized, secure, and efficient digital platform that manages inventory, billing, employees, suppliers, and sales analytics.

The application is built using **FastAPI (Python)** for backend performance, **PostgreSQL** for reliable data storage, and a responsive frontend using **HTML, CSS, Bootstrap, Jinja2, and JavaScript**.

# The Challenge Facing Sports Retailers

## Traditional Problems

- Manual stock tracking using registers or spreadsheets
- Paper-based billing and invoice generation
- No real-time view of available inventory
- Human errors in price, tax, and total calculation
- Difficulty in tracking sales and profit
- Scattered employee and supplier records
- Time-consuming customer billing process

## The Sportify Solution

- Automated inventory management with real-time stock updates
- Digital POS system with cart and instant invoice generation
- Centralized database for products, customers, employees, and suppliers
- Automatic GST and discount calculation
- Sales and profit reports with graphical analytics
- Secure role-based login for Admin and Staff
- Faster, error-free billing and improved store efficiency

# Project Overview



## Core Focus

In-store management, billing automation, inventory control, and reporting (no online delivery or e-commerce).



## Target Users

Small & medium sports stores, local retailers, single-branch shop owners, cashiers, and admins.



## Technology Stack

FastAPI (Python), PostgreSQL, HTML, CSS, Bootstrap, Jinja2, JavaScript, Chart.js.



## Key Features

Inventory management, POS billing, GST calculation, employee & supplier management, sales reports, role-based login.



## Business Benefits

Faster billing, reduced errors, real-time stock tracking, secure data, improved decision-making with analytics.

# Key Project Objectives

01

## Secure Access Control

Implement a robust login system with role-based access for Admin and Employee to protect sensitive business data.

02

## Centralized Data Management

Maintain unified and structured records of products, customers, suppliers, employees, and sales in a single database.

03

## Automated Billing

Enable cart-based billing and automatic invoice generation with GST, discounts, and multiple payment modes.

04

## Error Reduction

Minimize manual calculation mistakes and speed up billing and inventory operations through automation.

05

## Dashboard Intelligence

Provide real-time business insights such as sales trends, stock levels, and top-selling products using visual analytics.

06

## Inventory Optimization

Ensure accurate stock tracking with low-stock alerts and supplier linkage to avoid over-stocking or out-of-stock situations.

07

## Financial Transparency

Track sales, profit, GST, discounts, and payment modes to support accurate accounting and audit readiness.

08

## Role-Based Workflow

Separate functionalities for Admin and Employee to ensure secure operations and smooth task distribution.

# System Architecture: Eight Core Modules

## Authentication & Authorization

Secure login system with role-based access (Admin/Employee). Controls permissions to protect sensitive data and restrict features based on user roles.

## Dashboard & Analytics

Provides real-time business insights like total sales, revenue trends, low-stock alerts, and top-selling products using charts and summary cards.

## Product / Inventory Management

CRUD operations for sports products with category, price, stock quantity, supplier linkage, and low-stock monitoring.

## Billing & POS

Cart-based billing system with automatic GST/discount calculation, multiple payment modes (Cash/UPI/Card), and digital invoice generation.

## Customer Management

Stores customer details, purchase history, and contact information to support faster billing and future relationship management.

## Employee Management

Admin module to manage staff records including roles, shifts, salary, and contact information with access control.

## Supplier Management

Maintains vendor details, product sourcing records, and restocking coordination for smooth supply chain operations.

## Sales & Reports

Complete transaction history with date-wise filtering, profit analysis, and payment-mode tracking for business auditing and decision-making.



# Database Architecture

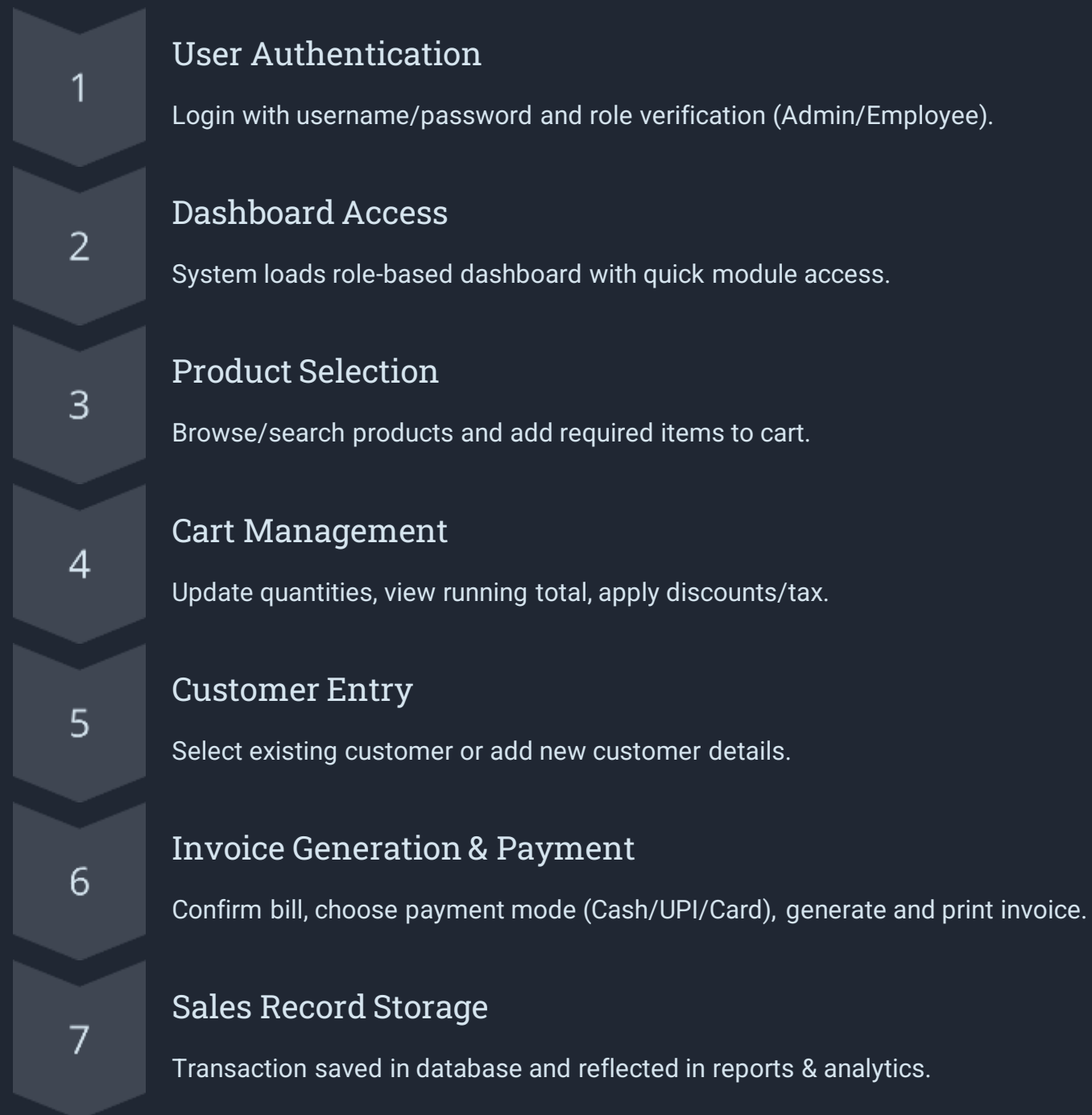
## Core Entity Tables

- **users** – Login credentials with role-based access (Admin / Employee)
- **employees** – Staff records including designation, shift, and salary
- **customers** – Customer details and contact information
- **suppliers** – Vendor database with address, phone, and product linkage

## Transaction Tables

- **products** – Inventory data with price, stock, category, supplier, and tax mapping
- **taxes** – Configurable GST and tax percentage settings
- **invoices** – Sales transactions with totals, discounts, and tax breakup
- **invoice\_items** – Individual product line items for each invoice
- **cart\_items** – Temporary storage for current billing session items

# User Workflow: From Login to Invoice



# Key User Interfaces



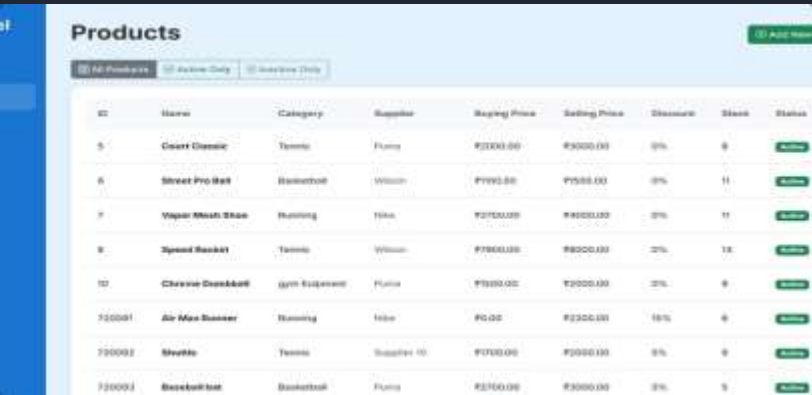
## Login Page

Secure authentication screen with username/password, role detection (Admin/Employee), and error handling.



## Admin Dashboard

Central control panel showing sales summary, low-stock alerts, total products, employees, and quick navigation to all modules.



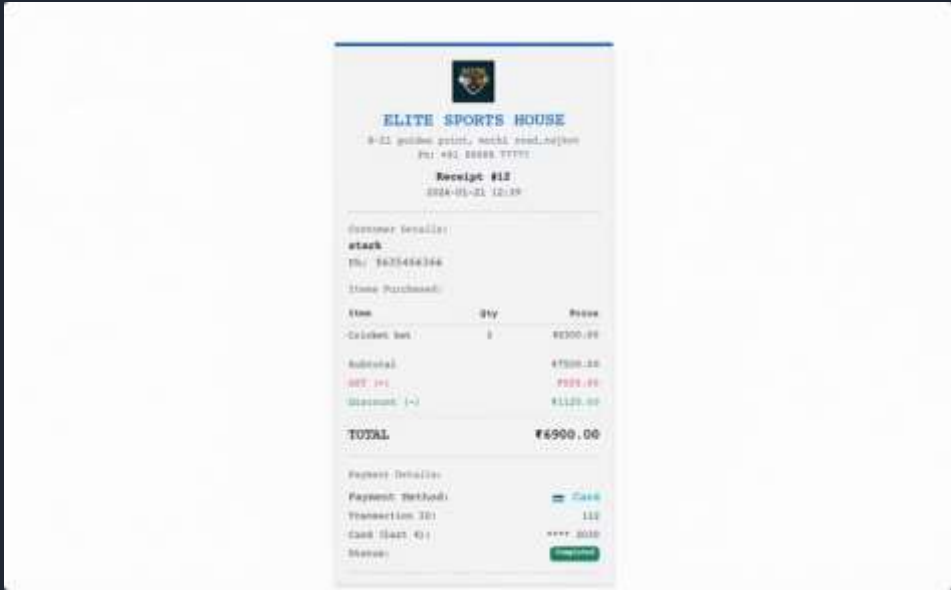
## Product Management

Table view with search, add, edit, delete options for products, stock level display, pricing, and supplier mapping.



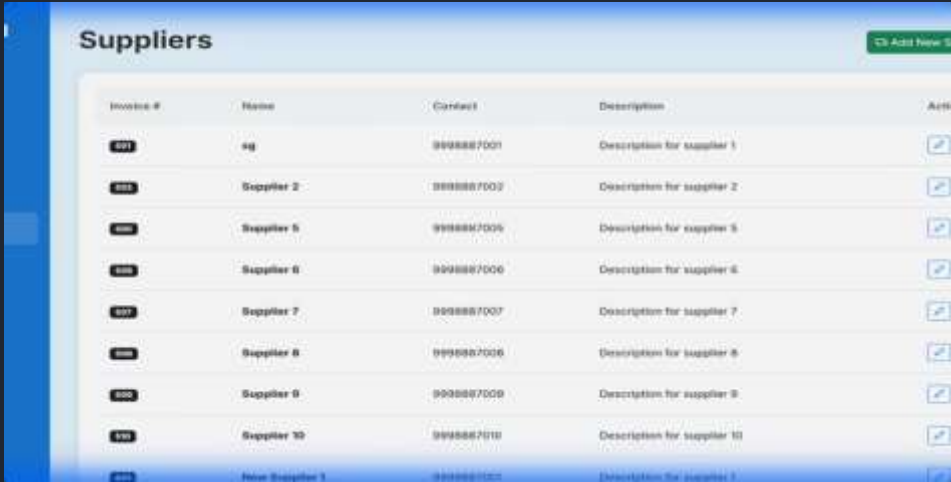
## Cart & Billing

Split view showing product list and shopping cart with quantity controls, GST/discount calculation, and payment mode selection.



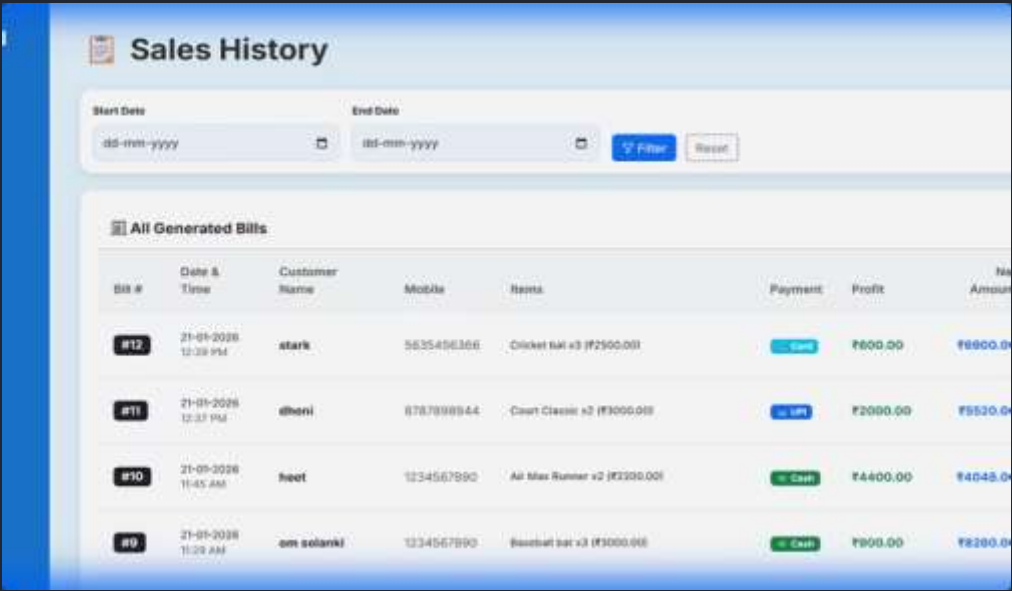
## Invoice / Receipt View

Printable digital invoice with store details, item list, tax breakdown, total amount, and payment information.



## Supplier Management Screen

Vendor listing with contact details, linked products, and restocking information.



## Customer Management Screen

Form and table view to add, update, and search customer records and view purchase history.

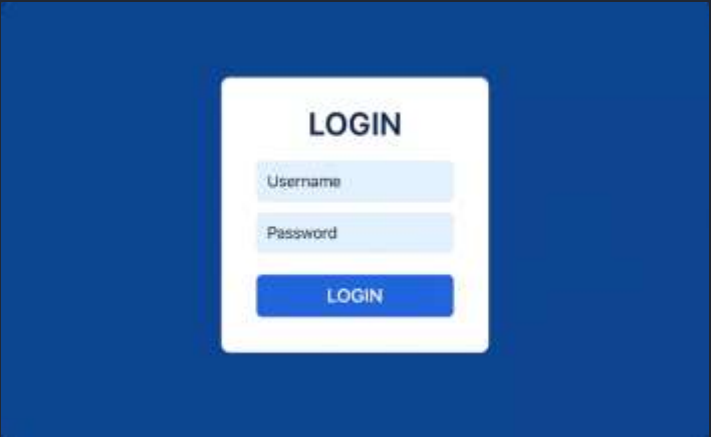


## Sales Reports & Analytics Page

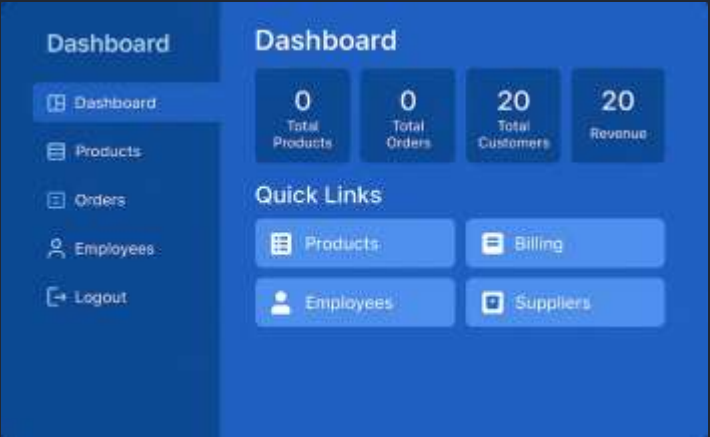
Date-wise sales filtering, profit analysis, and charts for trends and top-selling products.

# GUI Design

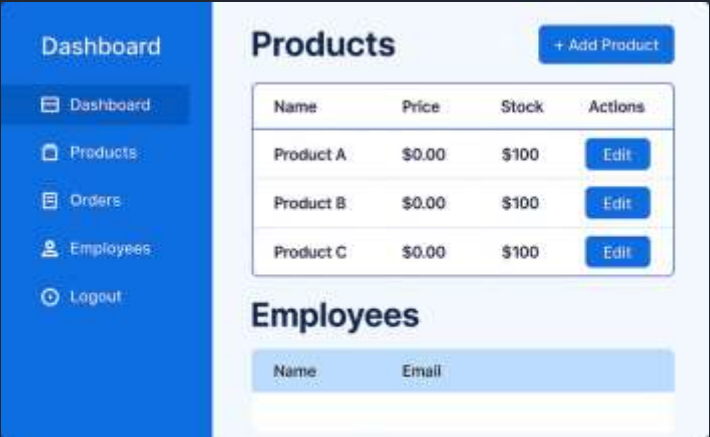
Complete interface designs showcasing all key user workflows and system modules.



Login Page



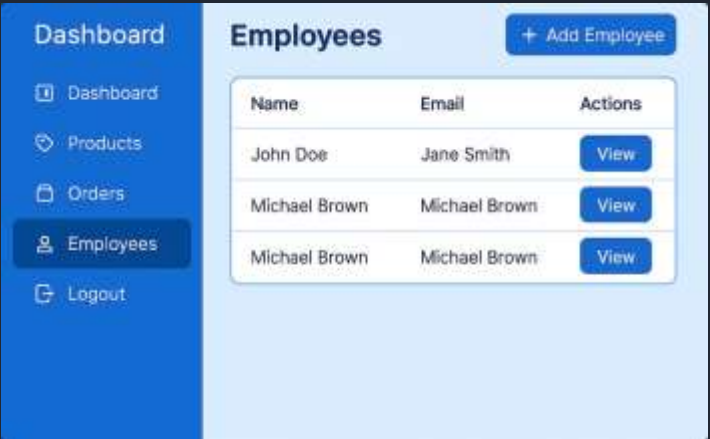
Admin Dashboard



Products GUI



Orders GUI



Employees GUI