



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

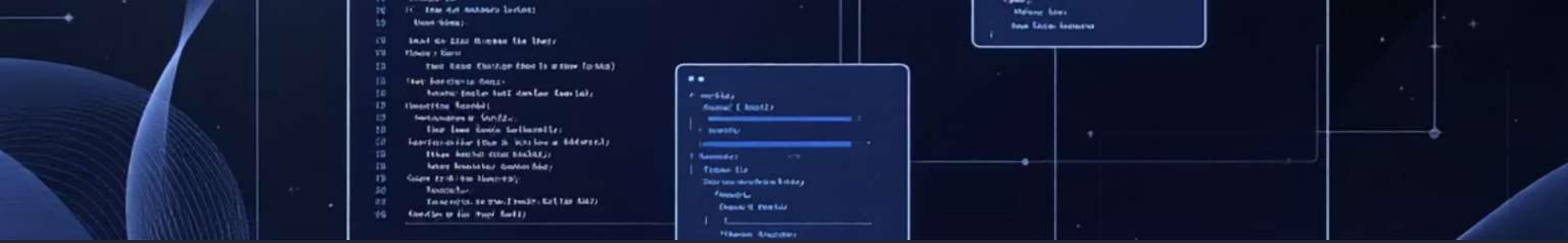
Admin module to manage staff records including roles, shifts, salary, and contact information with access control.

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



1 User Authentication

Login with username/password and role verification (Admin/Employee).

2 Dashboard Access

System loads role-based dashboard with quick module access.

3 Product Selection

Browse/search products and add required items to cart.

4 Cart Management

Update quantities, view running total, apply discounts/tax.

5 Customer Entry

Select existing customer or add new customer details.

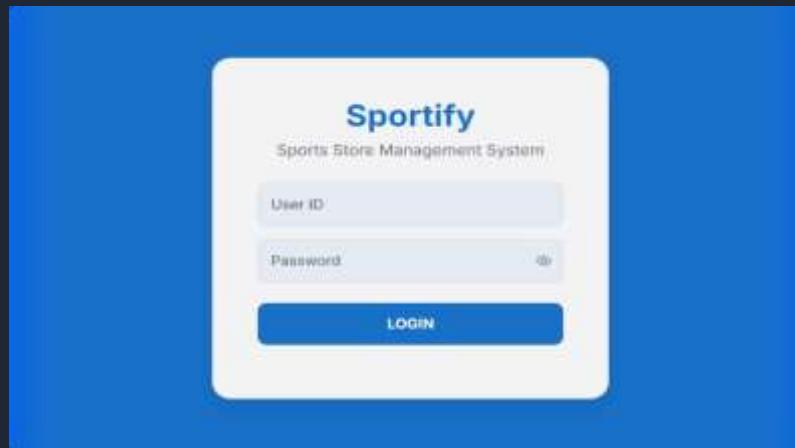
6 Invoice Generation & Payment

Confirm bill, choose payment mode (Cash/UPI/Card), generate and print invoice.

7 Sales Record Storage

Transaction saved in database and reflected in reports & analytics.

Key User Interfaces



Login Page

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

Products								
ID	Name	Category	Supplier	Buying Price	Selling Price	GST/Discount	Stock	Status
5	Desert Classic	Tennis	Puma	₹3000.00	₹3500.00	0%	8	Active
6	Street Pro Ball	Basketball	Wilson	₹1500.00	₹1750.00	0%	11	Active
7	Vapor Match Shoe	Running	Nike	₹2500.00	₹2800.00	-10%	12	Active
8	Speed Racket	Tennis	Wilson	₹3000.00	₹3500.00	0%	10	Active
102	Chaussie Basketball	Basketball	Puma	₹1800.00	₹2000.00	-10%	9	Active
720001	Air Max Runner	Running	Nike	₹2000.00	₹2200.00	0%	6	Active
720002	Shuttle	Tennis	Supplier A	₹1000.00	₹1200.00	0%	8	Active
720003	Breakout Ball	Basketball	Puma	₹2100.00	₹2300.00	0%	5	Active

Product Management

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



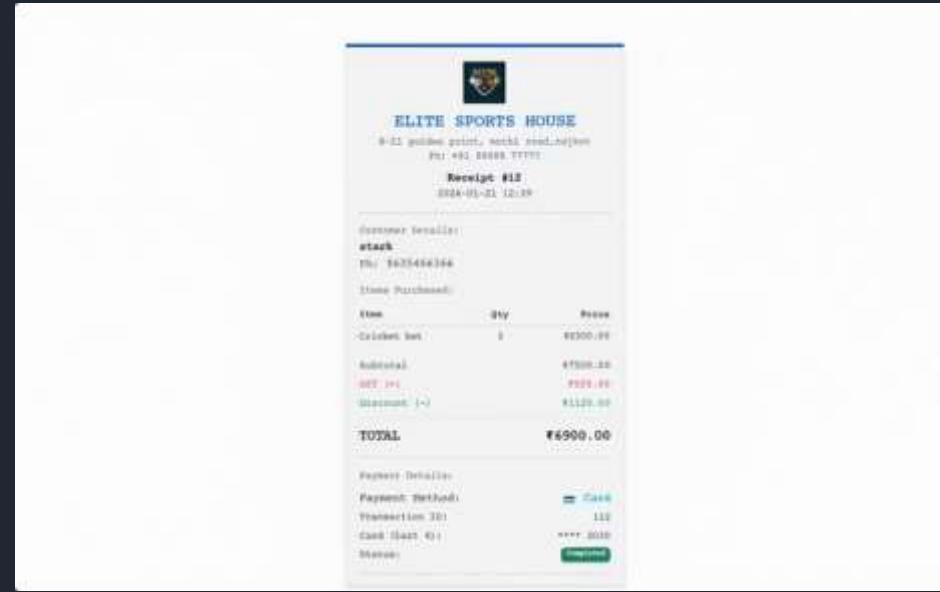
Admin Dashboard

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

A split-screen view. The left side shows a 'Cart Items' table with two items: 'Street Pro Ball' and 'Court Chaussie'. The right side shows 'Customer Details' (Name: John Doe, Mobile Number: 9876543210) and 'Payment Method' (Card, UPI ID: ariyan@paytm / 9898554433). There are also fields for 'Enter OTP (4 digits)' and 'Transaction ID'.

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.

Suppliers				
Supplier ID	Name	Contact	Description	Action
001	Supplier 1	9999997001	Description for supplier 1	
002	Supplier 2	9999997002	Description for supplier 2	
003	Supplier 3	9999997003	Description for supplier 3	
004	Supplier 4	9999997004	Description for supplier 4	
005	Supplier 5	9999997005	Description for supplier 5	
006	Supplier 6	9999997006	Description for supplier 6	
007	Supplier 7	9999997007	Description for supplier 7	
008	Supplier 8	9999997008	Description for supplier 8	
009	Supplier 9	9999997009	Description for supplier 9	
010	Supplier 10	9999997010	Description for supplier 10	

Supplier Management Screen

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

Sales History							
Start Date	End Date	Filter		Reset			
All Generated Bills							
Bill #	Date & Time	Customer Name	Mobile	Items	Payment	Profit	Total Amount
#12	21-09-2028 12:00 PM	stark	9854563456	Cricket Bat x3 (₹2500.00)		₹600.00	₹8200.00
#11	21-09-2028 12:30 PM	sheri	8787888844	Court Classics x2 (₹3000.00)		₹2000.00	₹5520.00
#10	21-09-2028 11:45 AM	heet	1234567890	All Max Runner x2 (₹2500.00)		₹4400.00	₹4840.00
#9	21-09-2028 11:00 AM	om solanki	1234567890	Running Kit x3 (₹3000.00)		₹900.00	₹8200.00

Customer Management Screen

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



Sales Reports & Analytics Page

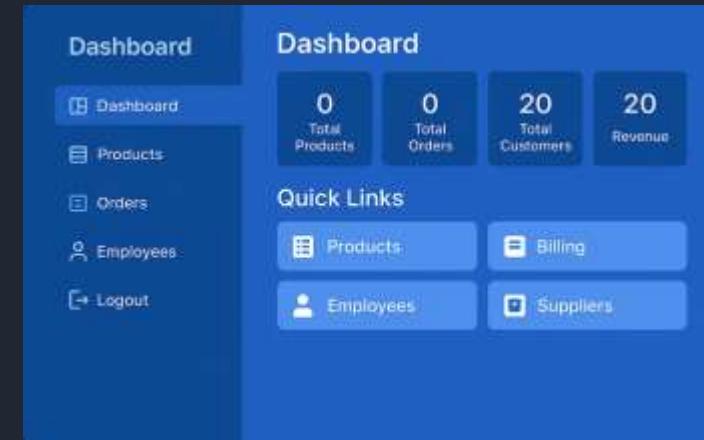
Date-wise sales filtering, profit analysis, and charts for trends and top-selling products.

GUI Design

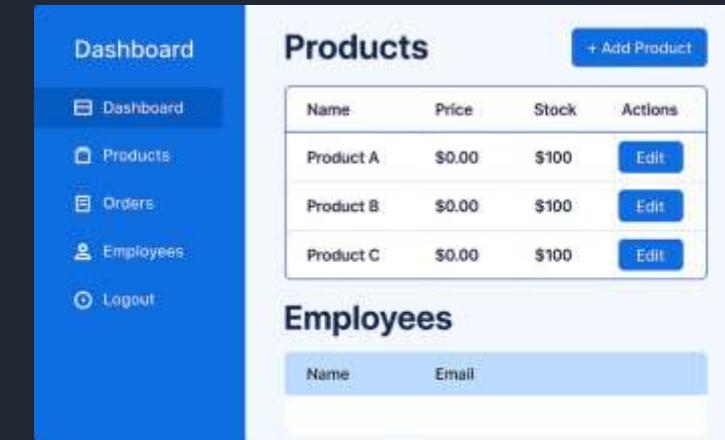
Complete interface designs showcasing all key user workflows and system modules.



Login Page



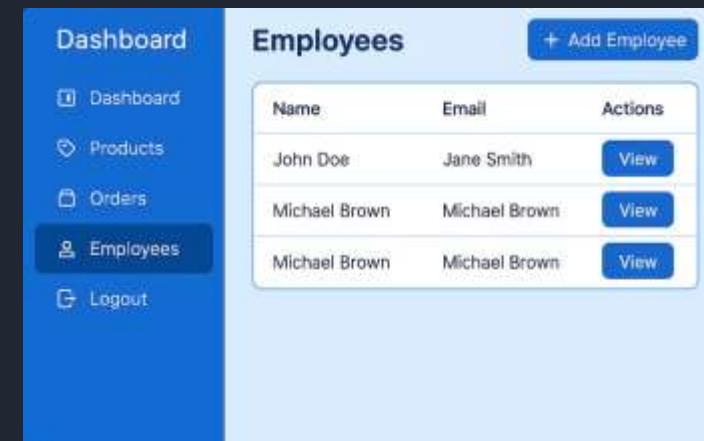
Admin Dashboard



Products GUI



Orders GUI



Employees GUI