North South University

Department of Electrical and Computer Engineering

Junior Project Proposal

Project Name

Bike Store Management System

Course Name: Junior Design
Course Code: CSE299
Section: 07
Group: 04
Git Repository: https://github.com/Nasim227/CSE299_Group-4.git

Serial Number	**Full Name**	**ID**
01	Md. Nasim Ahmed	2232936042
02	Md. Abir Hasan	2021833642
03	Md Murad Ul Momin	2232360642

Supervisor:
Dr. Mohammad Shifat-E-Rabbi [MSRb]
Assistant Professor
Department of Electrical & Computer Engineering
North South University, Dhaka.

Project Idea:

Bike Store Management System

1. Project Overview:

Today, fast and dynamic management systems are the key to success for a business. **The bike store management system** is a web-based application for managing bike retail store activities. With this system delivery, we can automate everything from organizing the product, interacting with customers, sending stock alerts, generating invoices, and more. We are going to digitalize everything. The system will provide an enhanced UI/UX, data integrity, and easy access for customers and administrator users. The system can be used for better management of bike sales and inventory in an efficient manner with providing high quality experience to the customer without increasing the manual workload.

2. Objectives:

- To create a browser-based shop for the sales of bikes with a attractive interface with less complexity, and easy to manage site.
- To build an effective backend database system, for product stock and sales data.
- To feature novelty functionalities bike views, low-stock notifications, and item comparison.
- To make email communication with customers better, messaging integrations.
- To provide accurate data to the users and to improve the current system with optimal foreign key mapping and the table design.

3. Core Features:

A. Navigation & User Interface:

- We will design a clean and efficient dropdown menu for easy site navigation.
- Homepage design.
- Login and signup page.
- Background video on login and signup pages.
- Dropdown menu under "More" in the navbar.
- Enhanced and expanded footer with links to social media (Facebook, etc.).

B. User Interaction & Feedback:

- Email and messaging APK integration.
- WhatsApp interaction support.
- Suggestion/recommendation feature from users.
- Product reviews submitted by users.

C. Product Management:

- Product comparison option.
- Add companies (brands) and link them to bikes.
- Product filtering and display based on user preferences.
- Show different angles/360-degree view of each bike.
- Alert when stock is low.

D. Inventory & Database Structure:

- Modify existing product table to represent all products ever sold in the shop.
- Introduce new table, current_product, to reflect currently available stock.
- Modify foreign keys in related tables for data consistency.
- Update the sell table to reference the modified product table.

E. Document & Report Management:

- Excel sheet export/import functionality.
- Printable invoices with PDF generation.

F. Security & Account Management:

- Password change functionality for users.
- Session handling and data privacy measures.

G. Shopping Experience:

- View and manage shopping cart.
- Personalized product suggestions.

4. Technical Specifications:

Frontend: HTML, CSS

Backend: PHP, JS

Database: MySQL

Tools & Libraries:

IDE/Platform: Visual Studio Code

7. Expected Outcome:

- A fully functional web-based Bike Store Management System.
- User-friendly dashboard for admin and customers.
- Real-time inventory updates and automated alerts.
- Enhanced shopping experience through interactive features.
- Streamlined backend database and efficient system architecture.

8. Future Enhancements:

- Online payment integration (SSLCommerz, Bkash, Nagad).
- Mobile app version of the system.
- Chatbot integration for 24/7 customer support.
- AI-based recommendation system for personalized suggestions.
- Analytics dashboard for admin insights.
- 360° Views.

9. Conclusion:

The designed "Bike Store Management System" aims at improving bike store management in the digital era. The solution is not just about eliminating routine inventory and customer-management headaches—it offers enhancements that make users' stores and businesses easier to manage. Having a scalable architecture and extendable design, it is possible for this project to form a template towards small business automation in Bangladesh Auto Retail Industry.