North South University

Department of Electrical and Computer Engineering
Junior Project Proposal

Project Name

Bike Store Management System

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

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Project Idea:

<u>Bike Store Management System</u>

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 product 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.
- 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. User Features:

A. Navigation & User Interface:

- Home page
- Login and signup option
- Navigation bar with multiple options
- Dropdown menus to make user experience easy
- Show products of different categories
- Show all products of same/multiple category together
- Show products according to brands
- Information of individual product
- Search bar
- Sidebar to filter result of shown product
- About us part for the shop
- To display the products and brands create a database and save all data
- See cart
- Discount and book products option for logged in users
- Product compare option
- Lot of brands and products for user to choose from
- Classic design for each part of the website
- More features will be added

B. User Interaction & Feedback:

- Email and messaging APK integration.
- WhatsApp interaction support.
- Suggestion/recommendation feature for users.

C. Security & Account Management:

- Password change functionality for users.
- Session handling and data privacy measures.
- Save hashed password for privacy maintenance

D. Shopping Experience:

- View and manage shopping cart.
- Personalized product suggestions.
- Search bar
- Sidebar to filter result of shown product

4. Manager Features:

A. Navigation & User Interface:

- Home page
- Login and signup option

B. Product Management:

- Sidebar design for different task
    1. Add new products to the shop(Product type, name, brand, etc.)
    2. Update product information(Availability, price, etc.)
    3. Delete products from the shop
    4. Save information of the sold products
    5. See all currently available products
    6. See user/customers information(Email, name, etc.)
    7. Products booked by customers
    8. Sold products
    9. See total monthly, yearly sell and keep track
    10. See best selling product
    11. Update/create discount for any product
    12. Keep track of stock

C. Document & Report Management:

- Excel sheet other functionality.
- Printable invoices with PDF generation.

5. Other Features:

- Different home page / UI for manager and user
- Database to save all the data and display products according to them

6. Technical Specifications:

Frontend: HTML, CSS

Backend: PHP, JS

Database: MySQL

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.