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**Department of Computer Science**

# National University of Computer & Emerging Sciences



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| **Semester** | **Spring 2024** |

**GitHub Repository:**

**Proposal**

**Title: Developing an Online Store for Smartphones**

**Project Idea:**

In today's fast-paced digital world, the demand for smartphones is skyrocketing, making them one of the most sought-after consumer electronics. To cater to this growing demand and provide users with a seamless shopping experience, we propose the development of an online store dedicated exclusively to smartphones. This platform will serve as a one-stop shop for users to explore, compare, and purchase their desired smartphones from a diverse range of brands and models.

**Functional Requirements:**

**Admin Module:**

1. **Login:** Administrators will have secure access to the admin panel through a login mechanism.
2. **Dashboard:** Upon logging in, administrators will be greeted with a comprehensive dashboard displaying essential metrics such as sales data, inventory levels, and user activities.
3. **Manage Products:**
   * **Add Product:** Admins will have the ability to add new smartphones to the store inventory, including details such as brand, model, specifications, images, and pricing.
   * **Update Product:** They can update existing product information, including modifying specifications, images, and pricing.
   * **Delete Product:** Admins will be able to remove smartphones from the inventory as necessary.
4. **Manage Orders:**
   * **View Orders:** Administrators can view a list of orders placed by users, including order ID, customer information, items purchased, and order status.
   * **Update Order Status:** They can update the status of orders, such as marking them as processed, shipped, or delivered.
5. **Manage Users:**
   * Administrators will be able to view and manage user accounts, including editing user profiles, resetting passwords, and managing user roles and permissions.
6. **Analytics:** The admin module will provide comprehensive analytics and reporting tools, enabling administrators to analyze sales trends, track inventory turnover, and generate reports for further analysis.

**User Module:**

1. **User Registration:** Users will be able to register for an account on the platform by providing necessary information such as name, email, and password.
2. **User Authentication:** Registered users can securely log in to their accounts using their credentials.
3. **Browse Products:** Users will have the ability to browse through the catalog of smartphones, filtering and searching based on various criteria such as brand, specifications, and price range.
4. **Product Details:** Users can view detailed information about each smartphone, including specifications, images, pricing, and availability.
5. **Add to Cart:** Users can add smartphones to their shopping cart for future purchase.
6. **Checkout Process:** Users will be able to proceed to checkout, review their cart contents, select shipping and payment options, and securely place their orders.
7. **Order Tracking:** After placing an order, users can track the status of their orders, including updates on processing, shipping, and delivery.
8. **Account Management:** Users will have the ability to manage their account settings, including updating personal information, viewing order history, and managing communication preferences.

**Frameworks:**

The proposed frameworks for development are as follows:

* **Backend:** Node.js with Express.js framework, utilizing Prisma ORM for efficient database management, specifically MySQL/PostregSQL.
* **Frontend:** React.js with Next.js framework for building dynamic and responsive user interfaces.
* **Authentication:** Kinde will be used for implementing secure authentication and access control functionalities.

This project aims to provide a user-friendly and feature-rich online store for smartphones, catering to the needs of both users and administrators while leveraging robust frameworks for efficient development and scalability.