**Project Design Phase-I**

**Solution Architecture**

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| Date | 03-11-2023 |
| Project Name | Cosmetics store management |

**Solution Architecture:**

Designing a solution architecture for a cosmetics store management system involves defining the software and hardware components, data flow, and integration points to efficiently manage various aspects of the business. Here's a high-level architecture for a cosmetics store management system:

**1.User Interface (UI):**

* Web application for store employees and administrators.
* Mobile app for customers (optional).

**2.Presentation Layer:**

* Front-end framework (e.g., React, Angular, or Vue.js) for the user interfaces.
* CSS for styling.
* User authentication and authorization for different roles (store manager, cashier, salesperson, and administrator).

**3.Application Layer:**

* Backend server responsible for processing requests and business logic.
* Programming language (e.g., Python, Java, Ruby, or Node.js).
* Web framework (e.g., Django, Flask, Spring, or Express).
* API endpoints to communicate with the database and handle various store operations.

**4.Database Layer:**

* Relational database (e.g., PostgreSQL, MySQL, or Microsoft SQL Server) to store structured data.
* Product catalog, customer information, sales data, and inventory management tables.
* Data access layer to interact with the database.

**5.Inventory Management:**

* Real-time inventory tracking and stock level monitoring.
* Barcode scanning or RFID for item identification.
* Integration with suppliers for automatic stock replenishment.

**6.Point of Sale (POS) System:**

* Integration with barcode scanners and cash registers.
* Sales processing, including discounts, promotions, and payment processing.
* Receipt generation and customer purchase history tracking.

**7.Customer Relationship Management (CRM):**

* Customer database for storing customer information, preferences, and purchase history.
* Loyalty program management.
* Email marketing integration for promotions and newsletters.

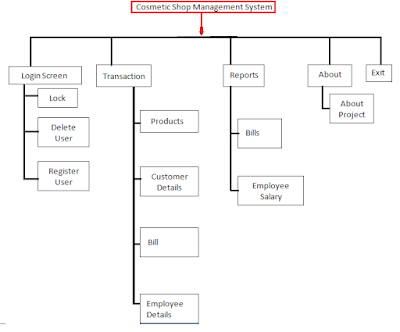
**8.Supplier Management:**

* Supplier information and contact details.
* Order management and tracking.

**9.Reporting and Analytics:**

* Dashboard and reporting tools for sales, inventory, and financial analysis.
* Data visualization tools (e.g., Tableau, Power BI, or custom charts).

**Example - Solution Architecture Diagram:** Cosmetics store management

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