KHULNA UNIVERSITY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course No: CSE 3210

Course Title: Database Management Laboratory

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TECH-SHOP DATABASE MANAGEMENT SYSTEM

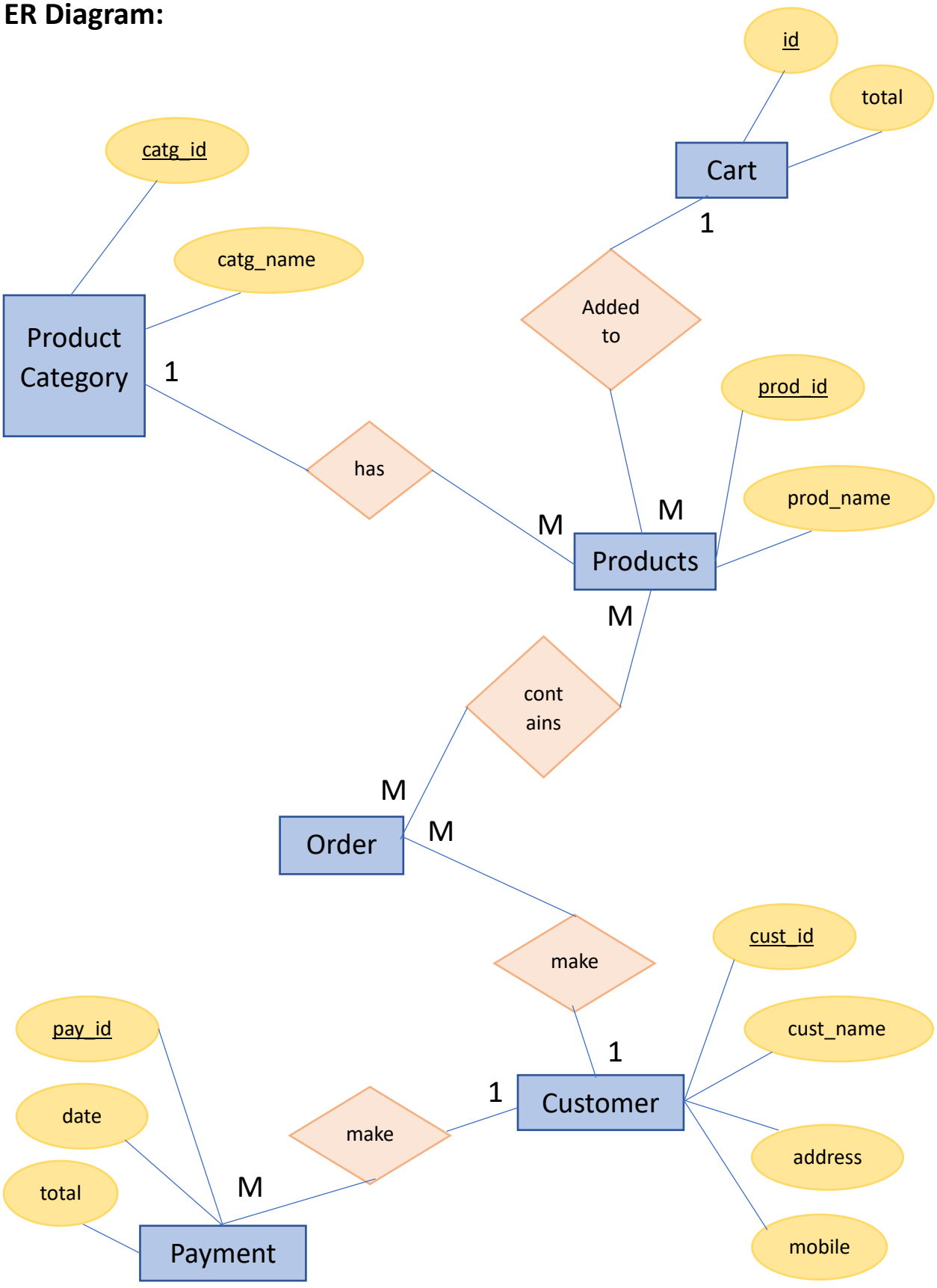
Introduction:

In the ever-evolving world of technology, Tech-shops play a pivotal role in offering a wide range of components, each belonging to various brands, and each with its own unique attributes, such as name and price. Efficiently managing this inventory is crucial for the smooth operation of such establishments. To address this need, we have developed a comprehensive database management system tailored for Tech-shops.

This comprehensive project report delves into the development, implementation, and deployment of the Tech-shop Database Management System, meticulously crafted to meet the specific demands of Tech-shops. The system is meticulously designed to streamline inventory management, facilitate brand tracking, offer dynamic pricing control, and empower Tech-shop operators with actionable insights for effective decision-making.

This report provides a detailed exploration of the Entity-Relationship (ER) diagram, which serves as the cornerstone of the database's structural framework. The ER diagram visually represents the relationships between the various entities, such as components and brands, and elucidates the schema's organizational structure. Furthermore, this document outlines the diverse features and functionalities that the Tech-shop Database Management System brings to the table, ensuring a holistic solution tailored to the unique requirements of Tech-shops.

ER Diagram: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Features:

The Tech-shop database management system offers the following key features:

1. **Inventory Management:**
    a. Store component details including name, price and brand.
    b. Assign each component to a specific brand.
2. **Brand Management:**
    a. Maintain a database of brands associated with the components.
    b. Store brand names for easy reference and organization.
3. **Data Retrieval:**
    a. Find components within a specific price range.
    b. List all components associated with a specific brand.
4. **User-Friendly Interface (optional):**
    a. Allow users to add, update and query component information.
    b. Create a user interface(e.g. web application) for easy interaction with the database.
5. **Data Integrity:**
    a. Implement data validation rules to maintain data integrity.

Conclusion:

The Tech-shop Database Management System is a robust and efficient solution for Tech-shops to streamline their inventory management processes.

By implementing this system, Tech-shops can optimize their operations, enhance data security, and make informed decisions based on the data stored within the database.