Project Synopsis
On
Bakery Shop Management System

Presented by

Pooja oza
Under the Guidance of
Trainer : Priti Yadav

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Introduction

The Bakery Shop Management System is a comprehensive software solution designed to streamline the operations of a bakery shop. This system aims to automate various tasks involved in managing inventory, sales, purchases, customer relations, and dealer interactions. By leveraging Hibernate, an object-relational mapping framework for Java, the system ensures efficient data management and persistence.

Objectives

- Automate inventory management to track stock levels, product details, and quantities.
- Facilitate sales management by recording customer transactions, product sales, and generating invoices.
- Manage purchases from dealers, including order placement, receipt tracking, and supplier management.
- Maintain customer records to enhance customer service and support marketing initiatives.
- Streamline dealer interactions by managing contact details, purchase orders, and supplier relationships.

Features

❖ Inventory Management
- Track stock levels and product details.
- Monitor product quantities and availability in real-time.
- Automated stock replenishment alerts.

❖ Sales Management
- Record customer transactions and generate invoices.
- Track sales performance and analyse sales data.
- Generate sales reports for analysis and decision-making.

❖ Purchase Management
- Manage purchase orders and track supplier deliveries.
- Monitor purchase history and supplier interactions.
- Automated purchase order generation based on stock levels.

❖ Customer Management
- Maintain customer profiles and purchase history.
- Implement customer loyalty programs and discounts.
- Manage customer feedback and complaints.

❖ Dealer Management
- Maintain dealer profiles and contact details.
- Manage supplier relationships and purchase orders.
- Monitor dealer performance and interaction history.

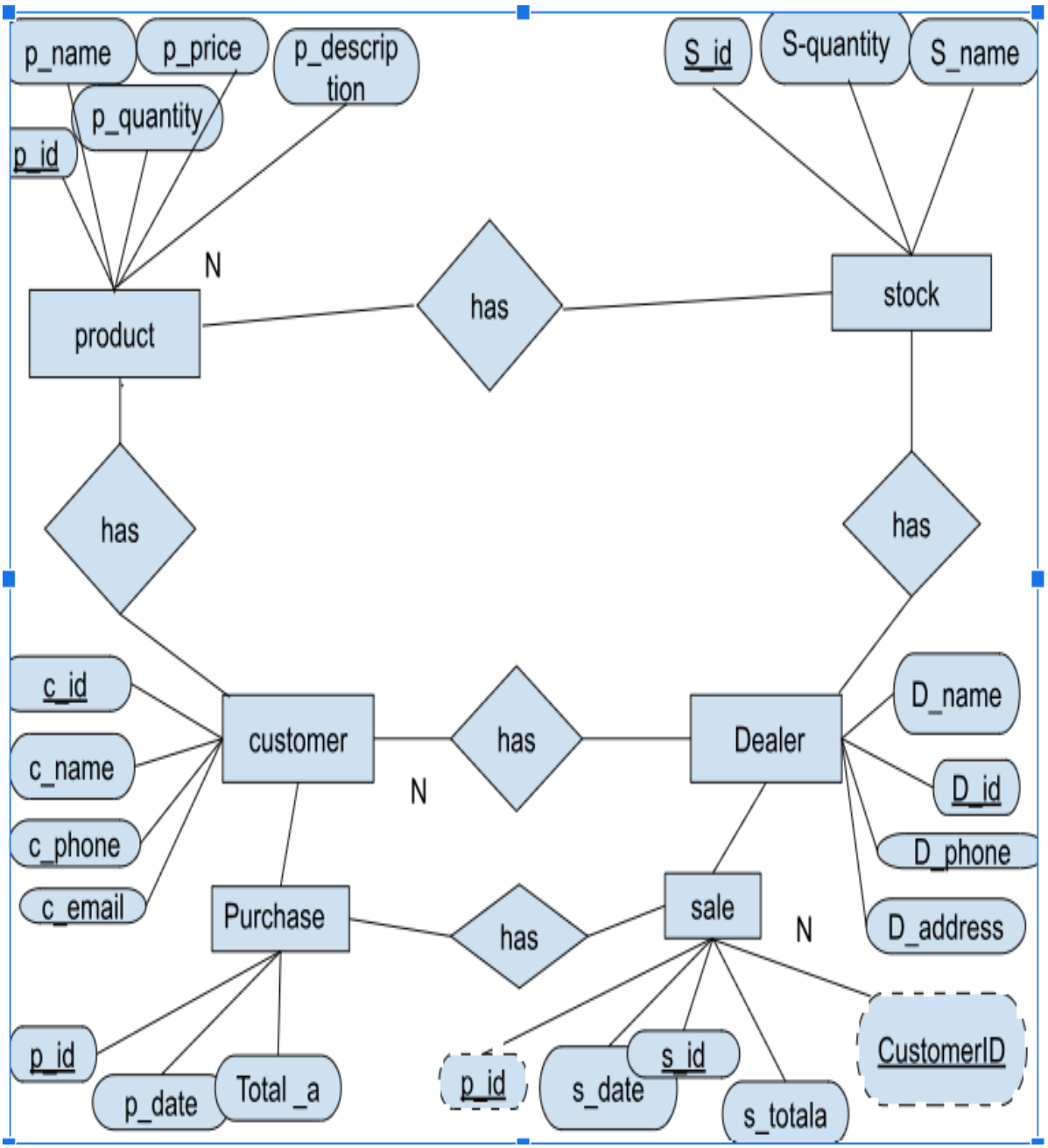
Technologies Used

- Java: Core programming language for implementing business logic.
- Hibernate: Object-relational mapping framework for data persistence.
- MySQL: Relational database management system for storing application data.
- Maven: Dependency management tool for project configuration.
- Git: Version control system for collaborative development.

System Architecture

The Bakery Shop Management System follows a multi-tier architecture:

- Presentation Layer: User interface for interacting with the system.
- Business Logic Layer: Contains application logic for processing data and implementing business rules.
- Data Access Layer: Utilises Hibernate for interacting with the database.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CustomerID

ER Diagram

Code database bakery management System

```
create database bakerymanagement ;
use bakerymanagement;
show tables;
CREATE TABLE stock (id int PRIMARY KEY,product_id
INT,quantity int);
  insert into stock values(11,1, 100);
  insert into stock values(12,2, 50);
  insert into stock values(13,3, 200);
    select * from stock;

CREATE TABLE sale (id INT AUTO_INCREMENT PRIMARY
KEY,customer_id INT,product_id INT,quantity INT,total_price
DECIMAL(10, 2),sale_date DATE,FOREIGN KEY
(customer_id) REFERENCES Customer(id),FOREIGN KEY
(product_id) REFERENCES Product(id));
       insert into sale values(1, 1, 2, 5.00, '2024-04-10');
       insert into sale values(2, 2, 1, 20.00, '2024-04-11');
       insert into sale values(3, 3, 3, 15.00, '2024-04-12');
         select * from sale;

CREATE TABLE Product (name char, description char, price
int, quantity_in_stock int);
       insert into Product values('Bread', 'Freshly baked bread',
5, 100);
       insert into Product values('Cake', 'Delicious cake for any
occasion', 20, 50);
       insert into Product values('Cookies', 'Assorted cookies
pack', 7, 200);
         select * from Product;
```

```
CREATE TABLE Purchase (id INT AUTO_INCREMENT
PRIMARY KEY,dealer_id INT,product_id INT,quantity
INT,total_price DECIMAL(10, 2),purchase_date DATE);
      insert into Purchase values(1, 3, 100, 300, '2024-04-10');
      insert into Purchase values(2, 1, 50, 125, '2024-04-11');
      insert into Purchase values(3, 2, 20, 400, '2024-04-12');
        select * from Purchase;

CREATE TABLE Customer (id INT AUTO_INCREMENT
PRIMARY KEY,name VARCHAR(30),address
VARCHAR(25),phone VARCHAR(20));
      insert into Customer values('pooja oza ', '123 , latur',
'9134567890');
      insert into Customer values('komal vays', '456 , pune',
'7894560123');
      insert into Customer values('renu shrama', '789,
hyderabad', '7890123456');
          select * from Customer;

CREATE TABLE Dealer (id INT AUTO_INCREMENT PRIMARY
KEY,name VARCHAR(20),address VARCHAR(25),phone
VARCHAR(20));
        insert into Dealer values('Supplier A', '123 Supplier St,
pune', '111-222-3333');
        insert into Dealer values('Supplier B', '456 Supplier St,
latur', '444-555-6666');
        insert into Dealer values('Supplier C', '789 Supplier St,
hyderabad', '777-888-9999');
          select * from Dealer;
```

Conclusion

The Bakery Shop Management System offers a robust solution for automating bakery shop operations. By leveraging Hibernate, the system ensures efficient data management and persistence, enhancing productivity and streamlining business processes. With its comprehensive features and user-friendly interface, the system empowers bakery owners to manage their operations effectively and focus on delivering exceptional customer service.