ONLINE RETAIL APPLICATION DATABASE PROJECT

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OBJECTIVE

This study aims to provide a comprehensive database schema that will make it easier for users to utilize an online retail application. Customers can register by providing their account number, bank name, and other necessary information. Each customer will have a unique customer ID, user ID, and password. Customers can purchase one or more goods in different quantities. Products can be divided into several classifications based on their price.

- Bills should be generated by the system based on the amount, price, and any applicable discounts of the item.
- The bill should contain information on the products that were purchased as well as the overall amount due. Customers can pay their bills with their bank accounts.
- The system ought to handle bank account information securely. The system ought to keep track of customer orders and details like the order date, delivery date, and order status.
- Product discounts ought to be controlled by the system and applied during the entire bill generation procedure.

- The system should only allow customers who have registered to access their accounts and complete transactions. The database should be designed to handle a large number of items, transactions, and clients effectively.

GANTT CHART

Task	Start Date	End Date	Duration (days)
Project Planning and Setup	2024-02-06	2024-02-06	1
Database Design	2024-02-07	2024-02-08	2
Database Implementation	2024-02-09	2024-02-10	2
Customer Registration	2024-02-12	2024-03-13	2
Bank Account Management	2024-03-14	2024-03-15	2
Item Management	2024-03-16	2024-03-19	2
Order Management	2024-04-06	2024-04-06	1
Discount Management	2024-04-07	2024-04-07	1
Bill Generation	2024-04-08	2024-04-09	2
Supplier Management	2024-04-10	2024-04-10	1
Integration and Testing	2024-04-11	2024-04-11	1
Documentation and Training	2024-05-07	2024-05-07	1
Deployment	2024-04-08	2024-05-08	1
Maintenance and Support	2024-05-09	2024-05-09	1

INTRODUCTION

The Online Retail Application Database Project aims to build an extensive database system for an online store. The project aims to provide a centralized platform for productive and successful operations by streamlining the administration of orders, inventory, customers, and items.

SQL (Structured Query Language) will be used in the project's design, development, and implementation of a relational database for data management. Ensuring data quality, security, and scalability, the database will be built to store and handle information about orders, inventory, and items. The creation of an intuitive web-based interface for database management and access is another component of the project. The interface will have features for creating reports and analytics, as well as adding, modifying, and removing entries.

LITERATURE REVIEW

(Cherkasova and Karlsson 2001; Schroeder et al. 2000)

A single instance at each layer is insufficient for the majority of online enterprises, even small- to medium-sized organizations, as each of these layers may encounter demands that exceed the capability of a single server or software resource. clustering multiple identically configured instances of hardware and software resources at each layer is the best practice recommended by vendors across all three layers of the typical online application architecture,

There are three important request distribution (RD) sites, as seen in Figure 2. To process HTTP requests, the web switch must first divide them among a cluster of web servers.[2]

(Liu et al., 2017, Díaz and associates (2017), **Hwang(2009).**

Consumer Internet shopping, a type of e-commerce retailing, has become more and more popular as online and hybrid shops provide alluring Internet-based services like discounts that are available only online and discounts for shipping Shoppers can locate things of interest by going to websites that aggregate products from multiple online sellers into a single page.

Noor Farizah Ibrahim , Xiaojun Wang(2019)

As such, the six common structures from the literature that this study integrates as its core themes are: transaction, website design, security and privacy, product performance, customer service, and delivery [48–50]. This review's primary goal is to interpret and validate the results of the topic modeling. These constructs were chosen because they were important and pertinent to this study, and because they were frequently discussed in the literature on internet shopping.

Jeffrey T. Prince(2007)

After that, a long list of themes and variables was compiled for additional study.

In the US, e-commerce has multiplied to constitute a sizable portion of sales. Within the personal computer (PC) sector, Dell and Gateway, two well-known direct-to-consumer PC suppliers, are fierce rivals in the PC business. By the end of 1998, the total revenues of the two companies had exceeded $22 billion, with a significant portion of those purchases occurring online (InfoTech Trends, 2001). In general, there is still continuous worry about the degree of substitutability between things sold online and in stores.2. This article investigates the timing and reasons behind the emergence of online and retail rivalry in the PC industry. Data on PC purchases at the home level is used to answer both of these queries. To determine the onset of online/retail PC

competition, I calculate the cross-price elasticity of online comparing those available in physical stores

Japutra et al. (2021) and Molinillo et al. (2020)
Thus, retail apps have the potential to be crucial in impacting the relationship between retailers and customers. But up until now, not much research has examined how CX affects the retailer. mobile application on customer loyalty (CL), or the devotion that a customer feels for a retailer.

Swapna Kodali (2007)
electronic commerce (e-commerce) facilitates communication over a network between the many parties engaged in a transaction and the administration of the data involved [2].
The study carried out by researchers at the Georgia Institute of Technology's GVU (Graphics, Visualisation, and Usability) Centre shows how important e-commerce is becoming. The researchers state that "e-commerce is taking off both in terms of the number of users shopping as well as the total amount people are spending via Internet-based transactions" in their summary of the results from the eighth poll.
More than 75% of the 10,000 participants said they had purchased online. Convenience was the most often stated factor (65%) for using the Internet for personal buying.

Gururaj H L , Praveen K S , Ramesh (2017)
Attacking applications is the most modified method of attack in the modern day. They manage to divert attention with application assets like "flash crowd attacks" [1] [4]. By setting up the network and creating legal requests for the applications to override the victim, they might function as a legitimate application processor. Because this kind of attack uses legal resources to pretend to be legitimate members of a network, it is very difficult to stop. They occasionally target the network to reduce service applications.
The widespread use of the Internet for a wide range of purposes has made low-cost and low-power WSNs possible thanks to technology. Due to this fundamental characteristic of networks.

Suci Inayah , Dana Indra Sensuse , Sofian Lusa Program (2023)
In addition, the growing trend of e-commerce in Indonesia has led to a shift in consumer behavior, with many offline store owners developing online shopping applications in response to the pandemic Covid-19's effects on their businesses. This is a calculated move to stay competitive and preserve their business in the face of societal changes in the shopping paradigm [3]. Entrepreneurs have also seized the opportunity to expand their market share and sales by leveraging technology, including websites and applications [4].

REFERENCES

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A text analytics approach for online retailing service improvement: Evidence from Twitter Noor Farizah Ibrahima,⁎, Xiaojun Wang

The beginning of online/retail competition and its origins: An application to personal computers Jeffrey T. Prince

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THE DESIGN AND IMPLEMENTATION OF AN E-COMMERCE SITE FOR ONLINE BOOK SALES By Swapna Kodali

Minimizing the impact of Flash Crowd Attacks on online retail applications Gururaj H L; Praveen K S; Ramesh B

Analysis of Factors that Influence the Acceptance of Using Online Retail Applications: a Case Study of XYZ Wholesale and Retail Stores Suci Inayah, Dana Indra Sensuse, Sofian Lusa