Bursa Technical University

Department of Computer Engineering

Software Engineering Project

Dijital Dokuma Web Project

Requirement Document

➢ Table of Contents

Preface:

Preface to the Dijital Dokuma Project

Dear Readers,

The Digital Dokuma project is a website designed for ordering and purchasing curtains. In our project, we aim to provide a user-friendly platform for customers to explore various curtain options and easily place their orders.

This document has been prepared to outline the final requirements of our project and to serve as a guide throughout the development process. It is important for all stakeholders and project managers involved in the development to familiarize themselves with this document. Additionally, regular updates will be made to this document to reflect any changes or updates to the project.

The version history of this document will track changes made during the development process, detailing the modifications and enhancements made in each version. The latest version of the document will always reflect the current status of the project.

In this version, the document's structure and content have been improved for clarity. The final requirements have been categorized into two main sections: ease of use and performance requirements.

This document serves as a roadmap for the Digital Dokuma project's development. It is essential for all stakeholders to thoroughly review the document and ensure a clear understanding of the requirements. The success of the project relies on collaboration and effective communication among all stakeholders.

Best regards,

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Version History:

- V1.0 (07/03/2024): Initial version created.
- V1.0 (14/03/2024): Story cards and user guide created.
- V1.1 (25/04/2024): Elaboration of requirements, supported by examples, to make them more understandable. Tables and graphs added.
- V1.2 (05/05/2024): Performance requirements section updated.

1. Introduction

1.1. Project Objective

"Dijital Dokuma" is a project focused on creating a curtain website where customers can conveniently order and purchase curtains. The platform aims to provide a seamless shopping experience for users looking to enhance their living spaces with high-quality curtains.

1.2. Goals and Success Criteria:

Goals:

1. **Quality and Design**: Our platform is on offering curtains made from premium materials, ensuring durability and elegance. We understand the importance of aesthetics in home decor and strive to provide designs that elevate the ambiance of any room.

2. **Online Presence:** Our platform establishes a strong online presence and is crucial for reaching a wider audience. Through our website, we aim to engage with customers, showcase our products, and provide a seamless shopping experience.

3. Customer Satisfaction: Customer satisfaction is at the heart of everything we do. We strive to exceed expectations by offering personalized service, high-quality products, and a seamless

shopping experience. Our goal is to build long-lasting relationships with our customers based on trust and satisfaction.

3. **Success Criteria:**
    1. **Increase in website traffic**: Since Dijital Dokuma focuses on providing the best curtains and related products, an increase in website traffic would indicate a growing interest in our offerings. This can lead to more visibility and potential sales, enhancing our ability to serve customers looking for quality curtains.

    2. **Positive user feedback:** For Dijital Dokuma, receiving positive feedback about the quality and design of our curtains is crucial. We aim to consistently monitor customer reviews and suggestions to ensure our products meet and exceed customer expectations.

    3. **Marketing and Branding**: The success of Dijital Dokuma will be measured by the effectiveness of its marketing and branding strategies. This includes metrics such as brand visibility, customer engagement, and the conversion rate of website visitors to customers. The project's success will also be reflected in its ability to establish a strong brand presence in the market and increase customer loyalty.

1.3. Project Scope

1.4. Target Audience

Dijital Dokuma targets to cater to a diverse audience, including homeowners and renters looking to enhance their living spaces, interior designers seeking high-quality curtain options, businesses and offices in need of stylish window treatments, event planners organizing special occasions, and online shoppers looking for convenient curtain purchasing options. The platform's goal is to provide a seamless shopping

experience for all these segments, offering a wide range of curtain designs to suit various preferences and needs.

1.5. References

All source codes and project files of the project are shared on GitHub at https://github.com/ProjectEcommerce. These resources are used in the development, improvement, and updating process of the website. The GitHub repository of the "Dijital Dokuma" Project is accessible to everyone as an open-source project. This allows individuals who wish to contribute to the project to develop the project or add their own features using the existing source codes. The GitHub repository of the project contains a lot of information such as the purpose of the project, its usage, source code, version notes, and licensing information. Additionally, contribution guidelines and contact information for those who wish to contribute to the project are also available.

2. General Description

2.1. Product Features

2.1.1. Intuitive User Interface

Our websites are more than pixels; they're pathways. We've meticulously crafted an intuitive
interface that beckons users—whether they're seasoned textile professionals or curious buyers.
Navigation is seamless, and every click feels like a well-woven thread.

2.1.2. Dynamic Product Listings:

Textile commerce thrives on product discovery. Our platform empowers textile companies to
create captivating product listings. From intricate weaves to vibrant prints, each product finds its

digital showcase. High-resolution images, detailed descriptions, and relevant specifications—we've got it all covered.

2.1.3. Inventory Management Made Effortless

Managing stock levels, adding new products, and handling variations (colors, sizes)—our backend tools simplify it all. Textile companies can focus on their craft while our digital loom ensures inventory harmony.

2.1.4. Seamless Ordering Process

Buyers glide through our ordering process like silk on a loom. Account creation, browsing products, adding items to the cart, and completing the checkout—each step is woven into a seamless experience.

2.1.5. Customer Support Weaving Connections

Our customer support isn't a chatbot; it's a human touch. We provide contact information for inquiries, handle queries promptly, and ensure customer satisfaction. Because behind every click, there's a person with a question.

2.1.6. Secure Payment and Reliable Shipping

Accepted payment methods? Check. Shipping options? Double-check. We've woven a secure payment gateway and reliable shipping channels. Whether it's a roll of fabric or a delicate lace trim, it reaches its destination intact.

2.1.7. Sustainability Threads

Circular economy principles run through our code. QR codes on product labels reveal stories—of organic cotton fields, fair wages, and eco-friendly dyes. Sustainability isn't an afterthought; it's the warp that holds our textile future.

2.1.8. Marketing Magic

Promoting products effectively is our forte. Social media integration, seasonal discounts, and special offers—we spin marketing strategies that resonate. Because every textile piece deserves its spotlight.

2.1.9. Privacy and Data Encryption

Our loom guard's privacy is like a master weaver. Customer information is encrypted, and data protection is paramount. Trust is the golden thread that binds us.

2.2. USER CLASSES AND FEATURES:

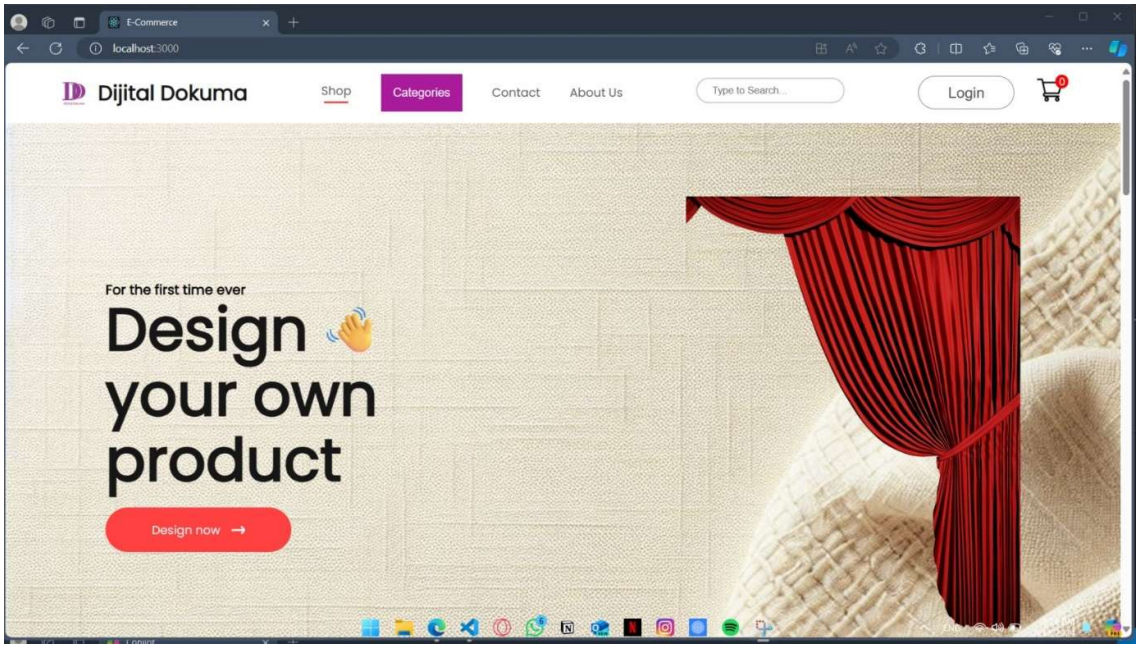
There are two different user classes on our website:

1. **Administrator Members:** Users in this class are individuals working in the administrative team of the website. They can access the website by selecting the administrator login button. Registered users can log in with their username and password. Non-registered users are directed to the registration page. Individuals who want to be administrators can become members by filling out the registration page with information such as their name, surname, username, password, and email, and they can view and approve new member requests on their screen.

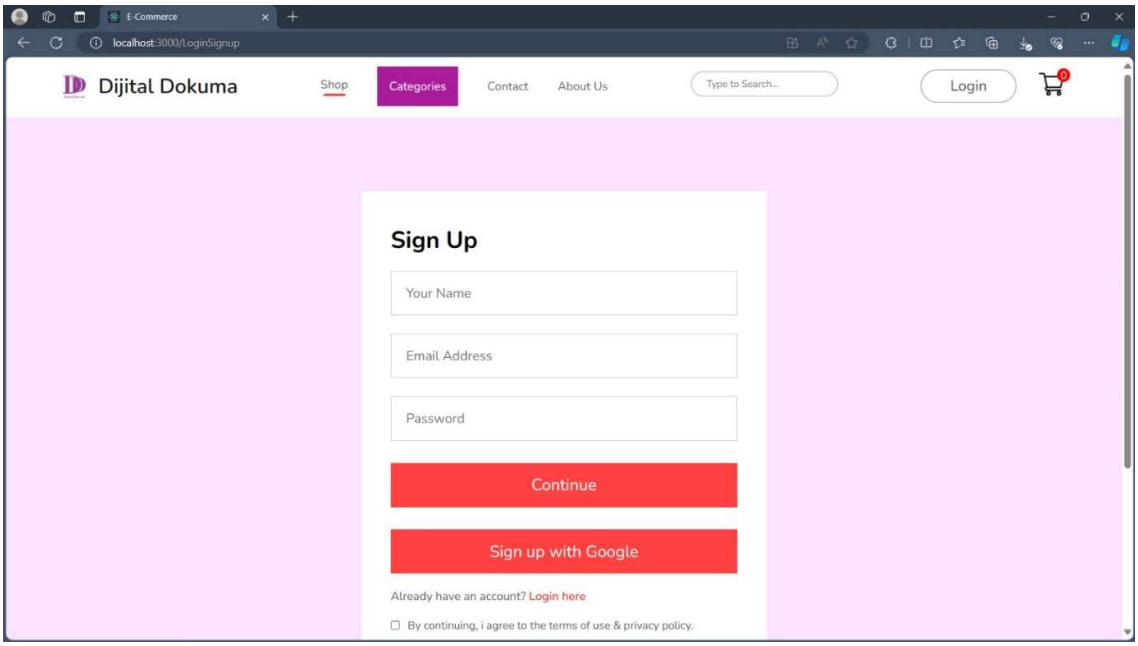
2. **Other Members:** Users in this class are individuals with different membership types such as donors, financial supporters, volunteer educators, company internship supporters, mentor supporters, electronic device/stationery supporters. They can access the relevant pages by being directed to the member page. They can complete their information and log in according to the membership type they choose from the registration page.

2.3. USER DOCUMENTS

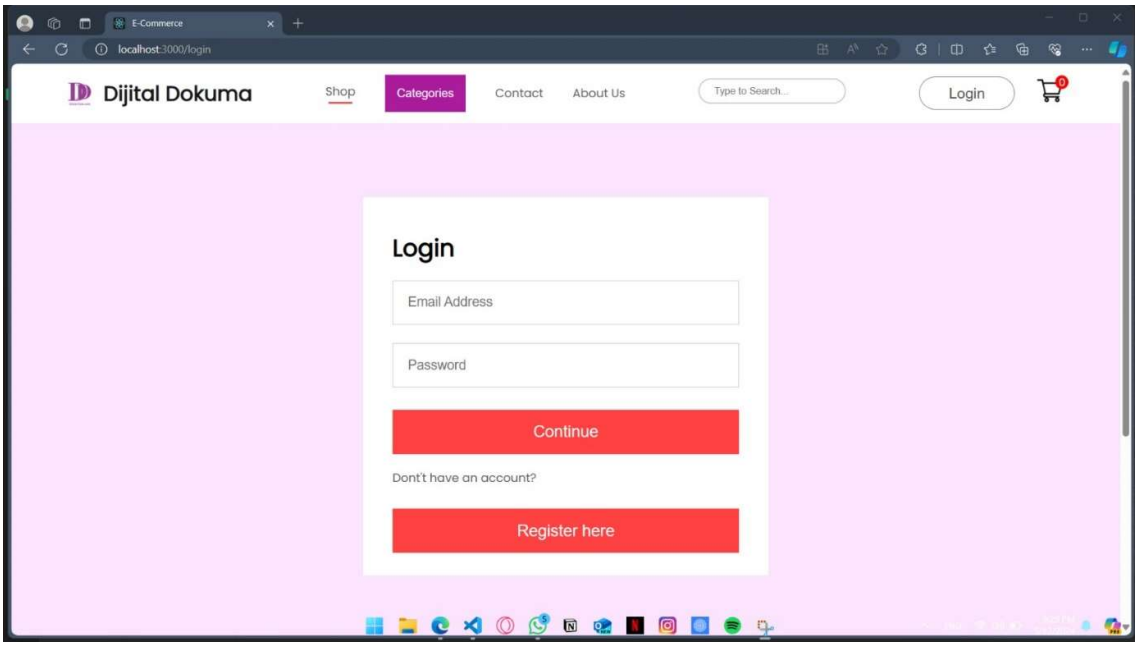
Home Page



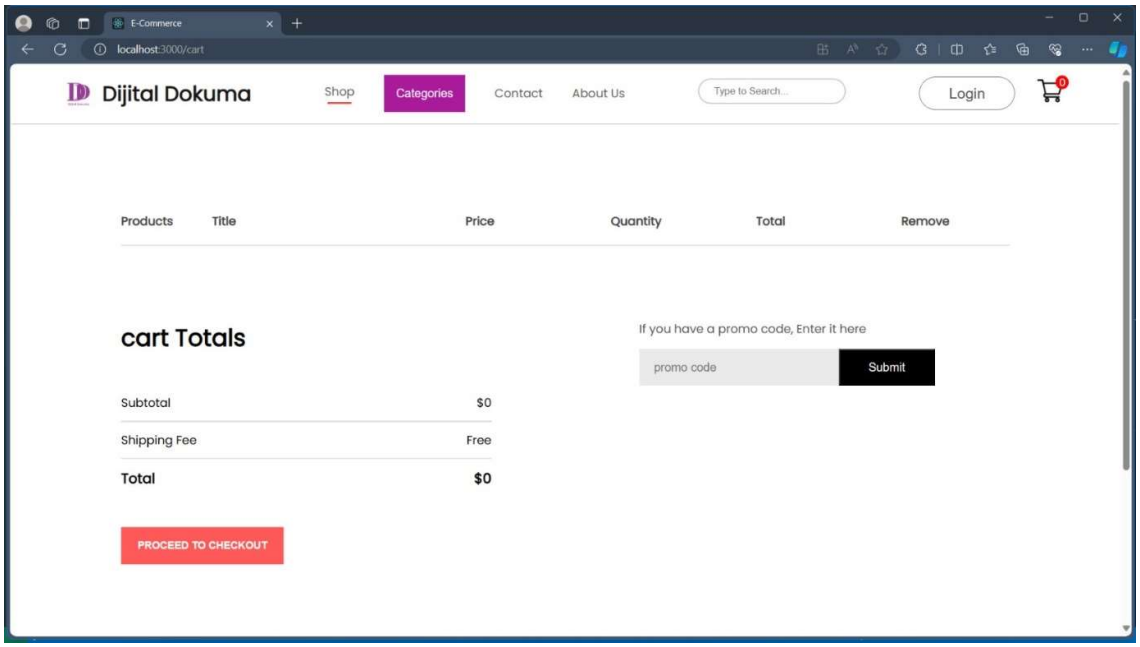
Registration Form



Log In Page



Add to your Cart



3. SYSTEM REQUIREMENTS

3.1. USER-FRIENDLINESS

The Pen Friends Project, established to support the education life of earthquake victims, attaches special importance to user-friendliness. It enables earthquake victims to easily access the resources they need to support their education. Ensuring that users have an enjoyable and efficient experience on the website is an important factor in line with the project's goals.

- **Having a simple and understandable design for the website**: Dijital Dokuma Project's website has a simple and understandable design to enable users to easily access resources. Menus and subpages are easily accessible.

- **Presenting resources by categorizing them:** The resources offered by the project are presented to users by categorizing them. Users can navigate between categories to easily find the information they need.

- **Providing quick access with a search box:** Dijital Dokuma Project's website includes a search box. Users can quickly access resources on the desired topic through the search box.

- **Tracking user feedback:** Thanks to the project's user-friendly interface, difficulties experienced by users while navigating the website are tracked. Thus, necessary improvements can be made to the website by considering user feedback.

- **Interaction with social media accounts**: Dijital Dokuma Project's social media accounts allow users to

follow up-to-date information about the project. Additionally, users can provide feedback and suggestions about the project through social media accounts.

3.2. DATA SECURITY

Data security is of great importance in the Dijital Dokuma project. The security of our users and the confidentiality of their data are among the top priorities of our project. Therefore, the following requirements must be met for data security:

- **Data Encryption:** All user data should be encrypted using the AES-256 encryption method while stored in the database. This way, unauthorized access to the data will be prevented.
- **Strong Password Policy:** Users should set strong passwords to access their accounts. Passwords should be at least 8 characters long and contain uppercase letters, lowercase letters, numbers, and special characters.
- **Data Backup:** Data should be backed up daily and stored on a different server. This way, in case of data loss, data can be restored from backups.
- **Authorization and Access Controls:** Access to the database should only be done by specific users. The access rights of each user should be determined according to their needs and managed according to a certain hierarchy. Additionally, all operations performed on the database should be logged.

Meeting the above requirements will help ensure data security in the Dijital Dokuma.

3.3. UPDATABILITY

Our system is constantly updated with new features and innovations. Therefore, thanks to the modular structure of our website, it will be possible to add new features or

updates. Before each update, tests are conducted to ensure that the system is compatible and that users are provided with a seamless service. Additionally, during the update process, there are no interruptions such as screen refreshes, and all operations continue smoothly.

All updates and changes will be communicated to users in a transparent manner, and relevant training will be provided to users. This way, our users will be able to use our website in the best possible way.

3.4. MULTI-USER SUPPORT AND HIERARCHY

The Dijital Dokuma includes multi-user support and hierarchy features. With these features, it will be possible for different users to have access at different levels.

Project managers and companies will register on the platform and will have user rights at different levels according to their membership. Students will create their accounts by registering on the platform and will be able to apply for internship announcements, request mentorship, or request stationery supplies according to their needs.

Additionally, administrators will be able to manage users with different permissions. For example, the authority to publish internship announcements can only be given to company accounts. The authority to approve mentorship requests can be given to administrator accounts. This way, having users with different levels of permissions on the platform and maintaining a certain order will be ensured.

Having these features will enable better response to the needs of users and allow the platform to be used more efficiently.

4. INTERFACE REQUIREMENTS

4.1. USER INTERFACE

- **Main Page**: It is the page where you can see daily updated curtains and you can add to your cart.

- **Login Page:** It is the page where users access the website. This page is usually a member can log to buy the items which are sent to cards. It's also helpful to track the orders.

- Registration Page: It is the page where new members register on the website. It contains different fields according to the membership type and requests information from users.

- Cart Page: It is the page where you can see your favourite curtains. It is also a page where you can pay for your selected curtains.

- Contact page: It is the page where you can contact dealers and get more information about the company and about the owners and you ask your interested questions.

4.2. HARDWARE INTERFACE

Server Computer for Website Operation:

The server computer is a computer where the website will be hosted, and users will be able to access the website. This computer must have sufficient features to meet the website traffic load and storage capacity of user data.

Database Server:

The database server is a computer where user information on the website will be stored and managed. This server should securely store user information and provide fast access to the website.

Internet Connection:
The internet connection of the website is another hardware required for users to access the website. A fast and reliable internet connection ensures that the website works smoothly even during high traffic periods.

Computers for Mentors and Intern Students:
Computers for mentors and intern students to use for developing, managing, and maintaining the website are also necessary for the project.

4.3. SOFTWARE INTERFACE

An open-source database application, MySQL, should be used for storing information and querying it flexibly. For development, JavaScript, PHP, CSS, HTML should be used.

The software interface is the page where users interact with the software. In the Dijital Dokuma project, the software interface page provides access for users to the features and functions of the project. This page should have a design that users can easily use and should be arranged to keep the user experience at the highest level.

The software interface page should include a menu bar listing the different modules in the project. This menu bar allows users to easily access all features of the project. Additionally, sub-menus can be provided to users to access features within a specific module.

The software interface page should also include a logbook where users can track the operations they have performed in the project. This way, users can easily track the operations they have performed and their operation dates.

Lastly, the software interface page should include a feedback mechanism where users can easily report errors or issues related to the project. This way, users can contribute to the

development of the project and help improve the project to a better level.

The software interface page is the main page where users can perform their operations in the project. The interface should be simple and understandable for users to perform the desired operation easily and quickly. On this page, users can log in to their accounts, edit their account information, apply for internships, and view the data of interns.

Additionally, there is an option to delete or deactivate a user's account. All operations on the interface are optimized to maximize user experience and perform quickly.

4.4. COMMUNICATION INTERFACE

In the Dijital Dokuma project, the communication interface is designed as an interface where users can interact with the system. This interface is a communication channel where users can report their requests, suggestions, and complaints.

The communication interface is usually designed as a form or message box. In this form, the user is asked to enter information such as their name, email address, subject, and message. By filling out this form, the user can provide feedback to the system through the communication interface.

Additionally, the communication interface can provide users with information that will help them solve the problems they encounter while using the system. This way, users can first use the communication interface to get help to solve their system-related problems.

The communication interface can also be used to inform users about updates or innovations in the system. This way,

users are informed about the innovations in the system and can use the system more efficiently.

5. SYSTEM EVOLUTION – PLANNED FUTURE IMPROVEMENTS

5.1. Data Encryption: All user data stored in the database should be encrypted using the AES-256 encryption method. This will prevent unauthorized access to the data.

5.2. Security: The security of customers' personal information and application documents must be ensured. The security of payments made through the website is also important.

5.3. Adding SEO (Search Engine Optimization) to the Website: SEO is all the efforts made to increase a website's ranking in search engines.

5.4. Regulation of Website Security Requirements: Security is one of the most important factors in a web project. Measures to protect users' personal and sensitive data, using hardware and software systems that provide protection against cyber-attacks, using SSL certificates, ensuring password security, data encryption methods, and frequent data backup operations should be taken. Additionally, data privacy policies, cookies, and terms of use should be provided to protect user privacy. All these measures should be taken to ensure the security of the website and prevent user damage in case of a data breach or cyber-attack. The website's SEO performance is also among the security factors, and security measures should be taken for search engine optimization of the website. A site structure that can be easily scanned by search engine bots, up-to-date content, and an SSL certificate for the website are important for ensuring user security. Additionally, avoiding spam links and malicious content is important for ensuring the website's security.

6. OTHER NON-FUNCTIONAL REQUIREMENTS

Performance Requirements of the Dijital Dokuma Project:
The performance requirements of the project are determined to ensure that users have an enjoyable and efficient experience on the website. The performance requirements of our project are explained in light of the following points.

- **Fast Loading of the Website**: The Dijital Dokuma Project's website should open quickly. User waiting times for the website to open can negatively impact user experience.

- **Quick and Seamless Access to Resources:** Users should be able to access resources on the website quickly and seamlessly. This ensures that users save time and easily access the information they need.

- **Regular Updates to the Website:** The website of the Dijital Dokuma Project should be regularly updated. This allows users to benefit from up-to-date information on the website and the addition of new resources. Additionally, updating the website is important for performance.

- **Quick Response to User Feedback:** Responding quickly to user feedback about the website is among the performance requirements. This ensures that users' suggestions and complaints about the project are taken into account and the website is improved.

- **Website Security:** The website of the Dijital Dokuma Project is among the performance requirements in terms of user security. The website should take necessary measures for the security of users' personal information and should be constantly monitored for any security vulnerabilities.

7. Glossary:

7.1. Terms

- Responsive: Refers to the ability of a website to be displayed on different devices (computers, tablets, mobile phones, etc.) in different sizes and resolutions.

- AES-256 (Advanced Encryption Standard-256): A symmetric encryption algorithm used to securely store data by encrypting it with a specified key. AES-256 operates in a key space with a key length of 256 bits, making it more secure than other versions of AES. AES-256 uses block cipher encryption with a secret key. During the encryption process, the data is divided into blocks of a certain size and then each block is encrypted.

- Database: The process of querying, which involves filtering and searching for data stored in a database based on specific criteria. Database querying is done using a query language provided by database management systems (such as MySQL). This process helps make data more easily accessible and meaningful. Queries are commonly used to filter data with specific categories or values, search for relationships between different data tables, or retrieve data within a specific time range.

- SEO (Search Engine Optimization): Optimization efforts made for a website to obtain better rankings in search engines.

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