COMPX576 PROGRAMMING PROJECT PROPOSAL

ARTECHNI

A collection tracker empowering user to effortlessly manage their art collections by managing all the information.

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INTRODUCTION

Art enthusiasts encounter a notable challenge in effectively managing their continuously growing art collections. As they take pleasure in showcasing diverse art pieces in their homes, offices, or galleries, they often find it difficult to keep track of the information associated with each artwork, such as the artist's name, purchase price, year of creation, installation location, and other pertinent details. This issue is equally relevant for gallery businesses that must efficiently organize and retrieve information about the art pieces they handle.

To address this challenge, *Artechni* serves as a collection tracker, empowering users to manage their art collections by storing all the relevant details. Additionally, it offers a QR code generation feature, enabling users to easily access and trace information about each artwork. This way, art collectors can maintain a comprehensive record of their collection, making it convenient to keep track of every piece in their possession.

METHODOLOGY

The development strategy for *Artechni* will leverage modern technologies and employ full-stack programming principles, covering the essential components of the database, API layer, and frontend user interface. This comprehensive approach will facilitate valuable learning outcomes, including proficient data management, processing capabilities, user-centric design, and the ability to deploy the system on cloud services.

Proposed technologies and programming languages:

Backend: SQL Server, ASP.NET Core API (C#)
Frontend: React (JavaScript), Chakra UI
Deployment: AWS cloud services

KEY FEATURES

Usability focused interface: *Artechni* features a usability-focused interface that combines simplicity, minimalism considerations, ensuring an intuitive user experience.

Tracking activity: The core feature of *Artechni* enables users to add, read, update, and delete art pieces information. Additionally, the system offers multiple sorting options, facilitating easy management of the constantly expanding tracking record.

QR Code: *Artechni* also provides users with the ability to generate QR codes that can be attached to each artwork. This allows for convenient information retrieval by simply scanning the QR code using a mobile phone.

POTENTIAL FEATURES (FOR THE FUTURE)

Audible information: Incorporating an audible information feature, *Artechni* enables users to record and store the unique story behind each art piece. This recorded narration can be played back and revisited by collectors, refreshing their memory about the significance and context of the artwork. Moreover, this feature facilitates convenient sharing of the artwork's story with friends and others, allowing users to convey the rich narratives associated with their collection in an engaging and accessible manner. Whether it's for personal reconnection to the art's essence or for captivating storytelling during social gatherings, the audible information feature enhances the overall art collecting experience and promotes a deeper appreciation for each piece in the collection.

Data visualization: As the volume of records increases, the significance of data visualizations becomes essential in facilitating a comprehensive understanding of data and enhancing the capacity for data analysis and decision-making for future planning or management purposes.

Multiple Users: An admin page may be integrated to facilitate the usage of multiple users by enabling the assignment of distinct user roles by the administrator.

USER INTERFACE DESIGN

1. Single User Authentication page
2. Artwork tracking activity page
    a. Create: This user interface allows user to add new collection details.
    b. Read: This user interface allows user to retrieve, read and sort stored information.
    c. Update: This user interface allows user to modify changes on the collection details.
    d. Delete: This user interface allows user to remove old data from the records.
3. QR code generator
4. QR code scanner

ESTIMATE PROJECT TIMELINE

Week 2 – 3: Research and finalize technologies and programming languages
Week 4: Initial Database/Backend structure
Week 5: Initial API development
Week 6: Login/User Authentication page and integration
Recess Week 1: Artwork tracking activity page and integration (CRUD)
Recess Week 2: Artwork tracking activity page and integration (CRUD)
Week 7: QR code generator and integration
Week 8: QR code scanner and integration
Week 9: Deployment (cloud services)
Week 10 – 11: Testing and finalizing
Week 12: Presentation