Project 1

Digital Art And NFT Management System

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Introduction

As digital art and NFTs (Non-Fungible Tokens) revolutionize the creative industry, managing such assets efficiently becomes essential. This project, Digital Art & NFT Management System, is a console-based application built in C that allows users to manage both physical and digital artworks seamlessly. It includes features like secure login, inventory control, sales tracking, and support for NFT-based digital art.

Objectives

To build a basic art inventory system handling both physical and digital artworks.
To provide a secure and role-based login system (Admin & Employee).
To integrate NFT tracking for digital artworks using Token ID.
To implement add, search, display, sell, sort, and filter functionalities using core C concepts.

Tools Used

Language : C
Compiler : CodeBlocks
Platform : Windows / Linux Terminal
Data Storage : Binary File Handling (artworks.dat)

Key Features

Secure Login System: Predefined Credentials for Admin and Employee

Artwork Management: Add artworks

With ID, Name, Artist Type, Category,

Price, Stock, and NFT Token ID (if

Digital).

Search & Display: View and search artworks by ID.

Sell Artworks : Update stock and track total sales.

Sort & Filter: Sort by price and filter

Digital artworks with NFTs.

Data Persistence: Artworks are saved and loaded using file handling for continuity.

Implementation Summary

The system uses struct to define artwork and user data. A menu-driven interface allows smooth navigation of all features.

The program makes use of loops, conditionals, and file I/O to manage the art inventory. All data is stored in a binary file, ensuring that it persists between sessions.

Challenges

Designing a flexible structure for both.

Digital and physical art.

Implementing basic inventory.

Operations using only console.

Features. Ensuring persistent storage with

Binary file handling.

Future Scopes

Add password encryption and user

Registration. Export sales reports.

Create a GUI version. Integrate live NFT APIs for real-time Verification.

Conclusion

This project demonstrates how even a

Foundational language like C can be

Used to build real-world applications

The system offers a simple yet effective

Solution for managing art inventories

While also introducing the concept of

NFTs, making it both technically relevant

And creatively satisfying.