

BCDV - 1011

DESIGN PATTERNS FOR BLOCKCHAIN

Team Members

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Requirements Analysis for Arts Provenance Project

PROBLEM

For artists, it is not always easy to connect dealers and collectors in an efficient way in terms of selling their products, and even they manage to connect with dealers and collectors, the party on the other side may not be interested in buying the artist's product. Selling the art to the next owner may take a long time due to the layers of the middleman. These intermediaries may not be honest and may sell the duplicate artwork. The entire process is not transparent and efficient. Also, it is common to see that the artworks lose of track, mark with inaccurate information, and become untraceable in the flow of time.

GOAL

Our main goal is to make sure that a work of art is original and that the person who is selling it is the rightful owner, there needs to be a recorded history of all of the previous owners. Currently only the most famous paintings could provide this kind of information.

Blockchain is a technology that can provide opportunities to make the process efficient, transparent and reliable. Our blockchain-based, decentralized system for artwork verification that provides instant and immutable information of each artwork including author's name, year, and a one-way hash of the content that can be used to retrieve and verify the information.

This project is based on ERC721-NFT tokens. These NFT tokens can be used to represent the digital ownership of artwork. When the owner of artwork issues a token-ID, along with the original author's information, the token can be used to track the entire transaction records when the artwork ownership is transferred to its current owner. Moreover, the other attributes that can also be attached to the token for tracing are the artist's info, the painting title or theme, a good description, and sales agreement.

STAKEHOLDERS

This project serves various parties such as artists, art enthusiasts, professional buyers, art agencies, and allows the parties to retrieve and share the real records of certain artwork directly with others in a secure, timely and tamper-resistant way.

STATE DATA

- The token-ID of the artwork and history of ownership is being tracked.
- Title, Date, Description, Price and an image of the artwork.
- The record of ownership is being generated

RESTRICTIONS

- If a customer wants the art piece immediately there will be some restrictions geographically.

- If an agency or a customer failed or delayed paying the full price for the art there will be consequences.
- Without a background verification one cannot sell or buy the artwork due to fraudulent activities.

Expectation

- The betting price for everyone must be secure.
- To access the token code of the art piece multi-factored authentication must be imposed to avoid any kind of breaches.