Case Study:

Open market for chess content creator and consumer. The game of chess in one of the oldest game ever invented, and yet it has proven to be one of the most popular one even today. Throughout history it also has adapted to the technology of the day. It is now being played in the internet between players from different continents and chess masters become internet celebrities on twitch by playing any online challengers.

The other side of it is the wealth of chess knowledge generated over centuries. We have historical records of chess games played in the courts of the caliphs a thousand years ago to the analysis of the chess games played in professional tournaments just an hour ago. Traditionally these chess knowledge has been written in books, and then some of them become digitized in chess software, but it now has to adapt once more to the internet technology.

Chess contents are unique. Before the computer era, chess players read chess books with the help of physical chess boards. With the computer people can interactively use a chess board on the screen. But unlike chess books, computer programs become outdated, and old programs are no longer working on modern operating systems.

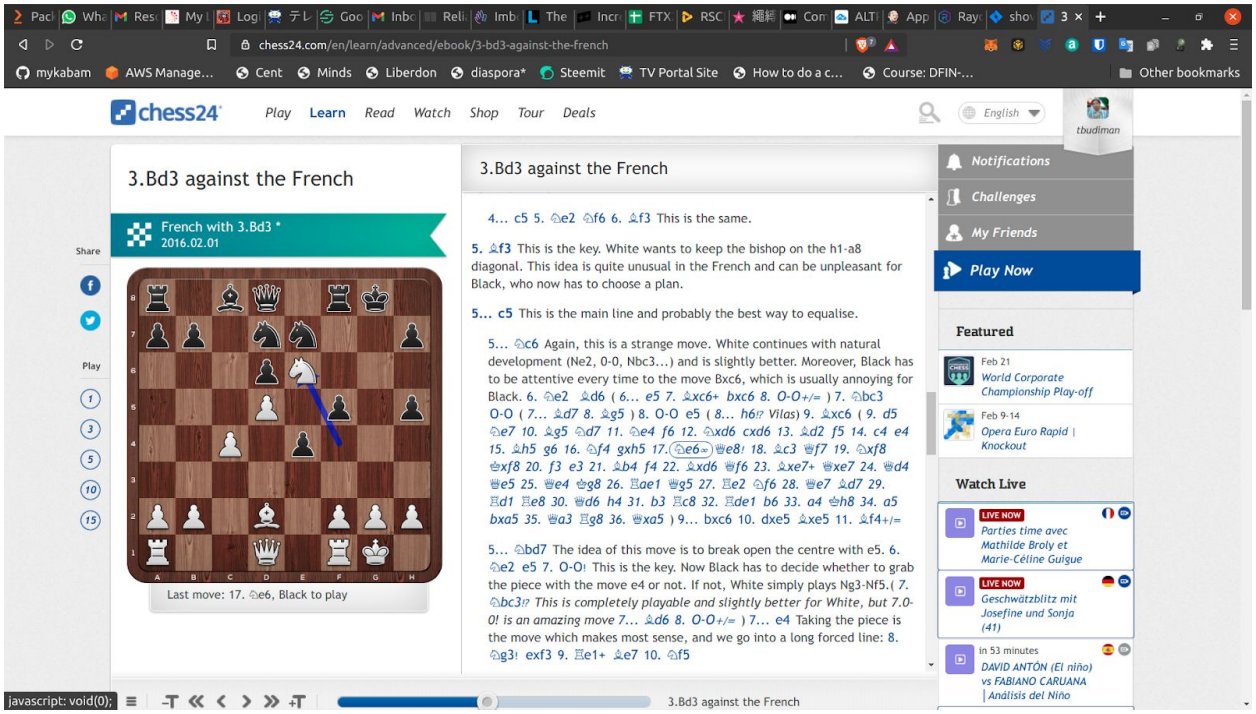
Modern e-book standard doesn't support interactive chessboard either, so the chess world need to create a new standard for this kind of content. The creators of chess contents need a tool to easily create such an interactive content and then publish and sell the contents to the chess learners. On the other side chess learners and fans need a technology where they can find and consume the chess contents that they want, but at the same time they need to have guarantee that they really own the chess contents that they bought and that they can always access them in the future. The other problem is that a lot of chess fans and students don't have a lot of money to get the contents that they need, so there is a need for a system where they can easily resell the 'e-books' that they have read, or that they only need to rent the book for a period of time. Or that they only need a relevant part of the book so they can buy only a part of a book.

This can be solved by putting the contents in the blockchain as NFTs, that they can freely buy, sell, rent, combine, break-ups, or lend them in subscription mode.

Current Centralized Solution

Most of the current chess contents are still sold in the form of books by various publishers (usually they're publishers that are specialized on chess). There are a few digital content publishers that are using their own proprietary format for the interactive board that are heavily depends on their service and software. In a sense the buyer are forever depended on their platforms to keep running to access the contents. On the other hand chess writers depends on these publishers to publish their contents and materials and these publishers normally take most of the revenues, leaving a small portion to the content creators.

Chessable.com



Chess24.com

The above images are to illustrate the interactive boards needed to display chess contents, and also samples of the current centralized solution. In both cases the contents are served from their sites and depend on their platform to keep running.

The first one is selling the contents by titles (customer can buy individual titles), while the second one use a subscription model.

Problems

1. Publishers take a big cut from the sales of chess contents.
2. Customers don't actually own the content they bought, as it depends on the platform.
3. Chess contents are expensive, there are no way to buy only a part of a 'book'. Or resell it after reading. Or lent it. Or only pay the materials that are accessed. The internet age should allow all these, while also provides some protection against illegal copies.
4. Chess platforms are siloed and they don't interoperate with each other.

How blockchain can help

1. An open market in a public blockchain can help reduce the role of intermediaries, and allows a more efficient market between content creators and consumers.
2. An open standard format for chess contents is needed. These chess contents are then protected by encryption and then stored in public blockchain (such as IPFS and / or Filecoin), and then the ownership and the keys to access them are stored in NFTs. With an open standard for the 'reader', the owner of the NFT actually own the content in a raw format which can be easily converted to a future technology or software. The reference implementation of the reader should be available as an open source software.
3. The tools should allow:
    a. For content creators:
        i. Create chess contents and pack them as an NFT
        ii. Combine NFTs to form a bigger NFT (eg. chapters to a book)
        iii. Sell the NFTs on an NFT market
        iv. Get an identity NFT to contain the writers information
        v. Put the NFTs on subscription list where it can earn some money when someone consume it.
    b. For content consumers:
        i. Buy contents (NFT pack)
        ii. Buy part of the content (smaller NFT)
        iii. Sell them on the market after use
        iv. Put them as available for rent
        v. Rent NFT with set payment
        vi. Subscribe to the subscription list. Subscription needs some payment and ends after a period of time.
    c. The payment system should handle these possibilities:
        i. Take a small fee to the protocol for content creation
        ii. Take a small fee from the NFT trade
        iii. Take a small fee for the content creator on secondary trades (after the original one)
        iv. Manage NFT rent and its payment and returns

v. Manage subscription and its payment distribution

4. Allows other systems to be built on top of these services. They could add more values (such as better readers with adjustable boards, personal notes, etc.) or combine it with chess playing platforms or databases.

What are current blockchain solution

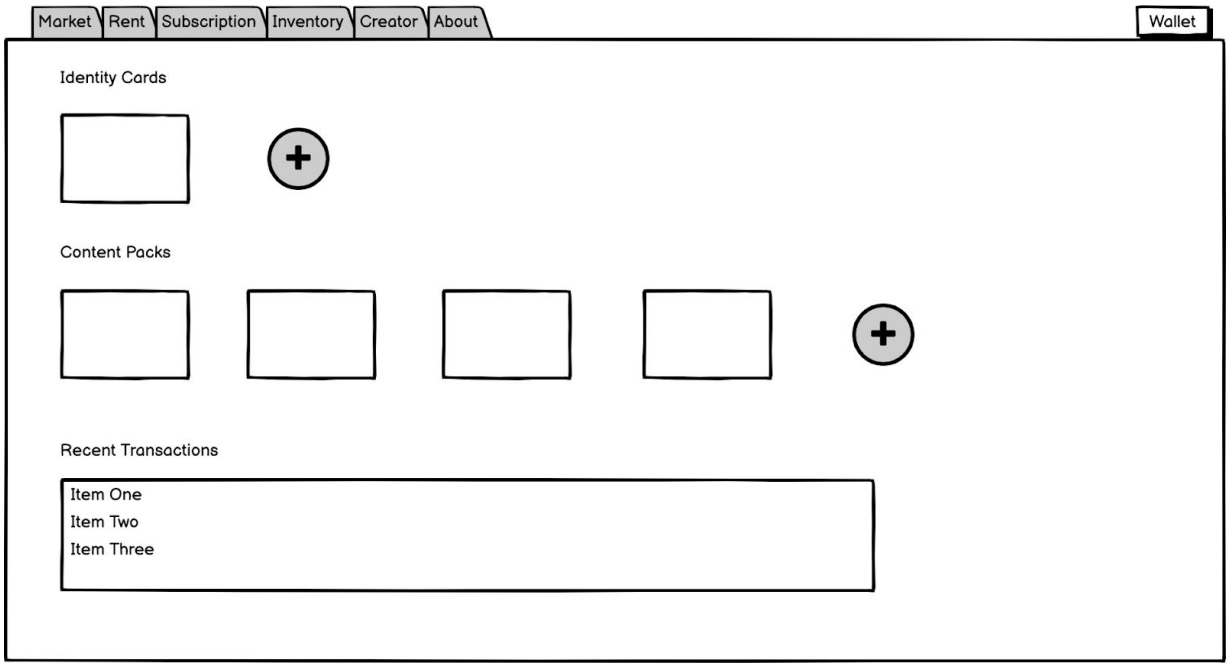
There is no blockchain solution for chess contents.

What is the USP of your project

1. For content creators:
    a. A new method for creating and directly self-publish contents
    b. An automatic method to monetize content
    c. An easy method to track distribution and usage statistics
2. For content consumers:
    a. A real and provable ownership of the content
    b. A method to buy partial or whole contents as needed
    c. A method to sell content
    d. A method to rent content
    e. A method to consume content by subscription
3. For chess publishers:
    a. A foundation for building value add services and product
    b. A common standard that allows collaboration with other services and product

Design

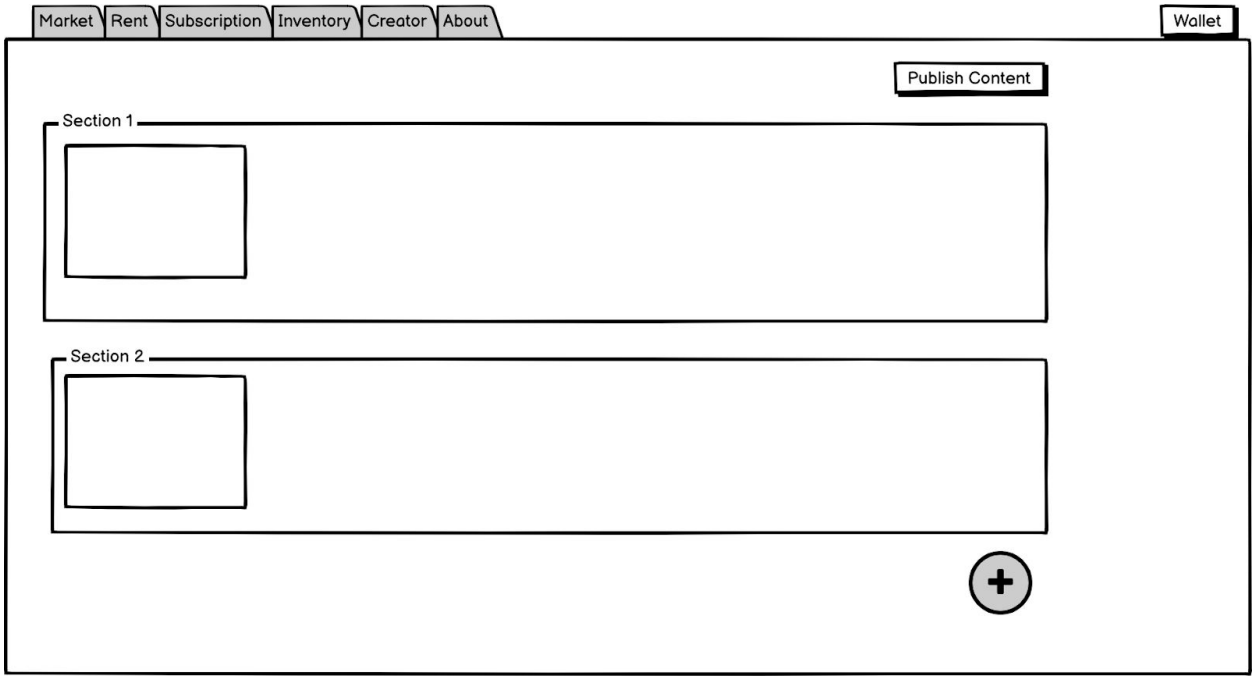
Creator Main Screen



Options are:

1. Create Content
2. Create Packs (from several contents)
3. Create Copies
4. Put on Sale (and set price)
5. Put on Subscription List

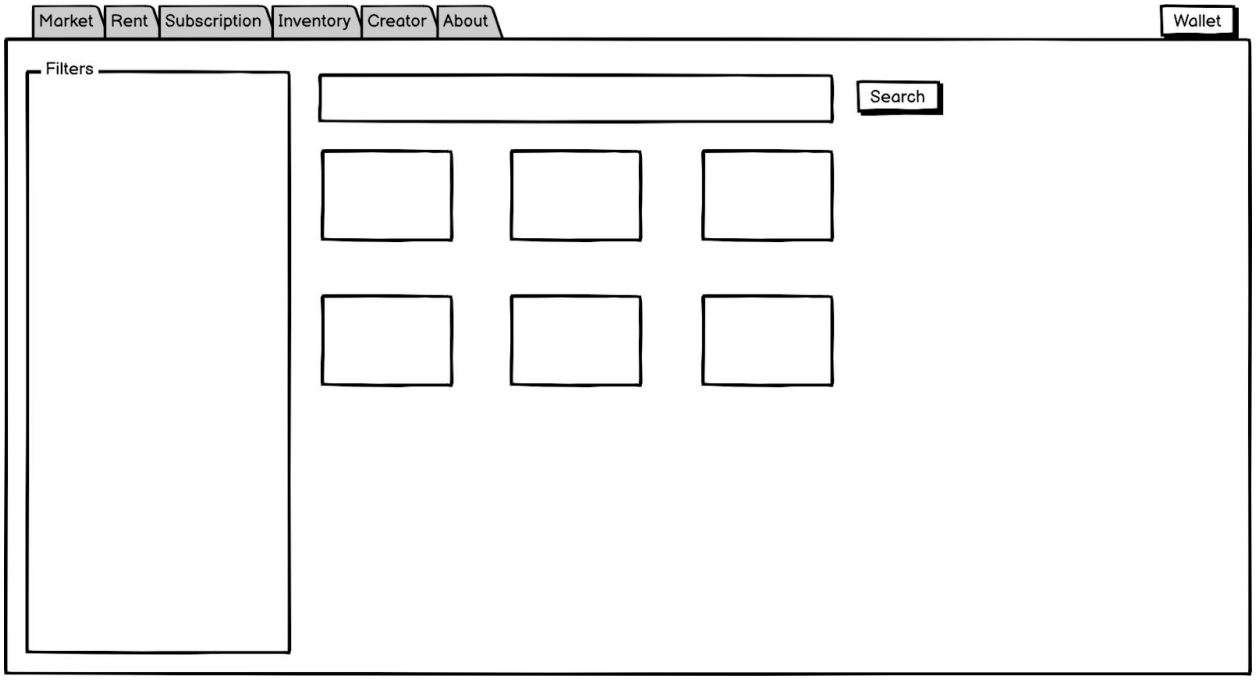
Create Content for Creator



Options are:

1. Add sections
2. Publish

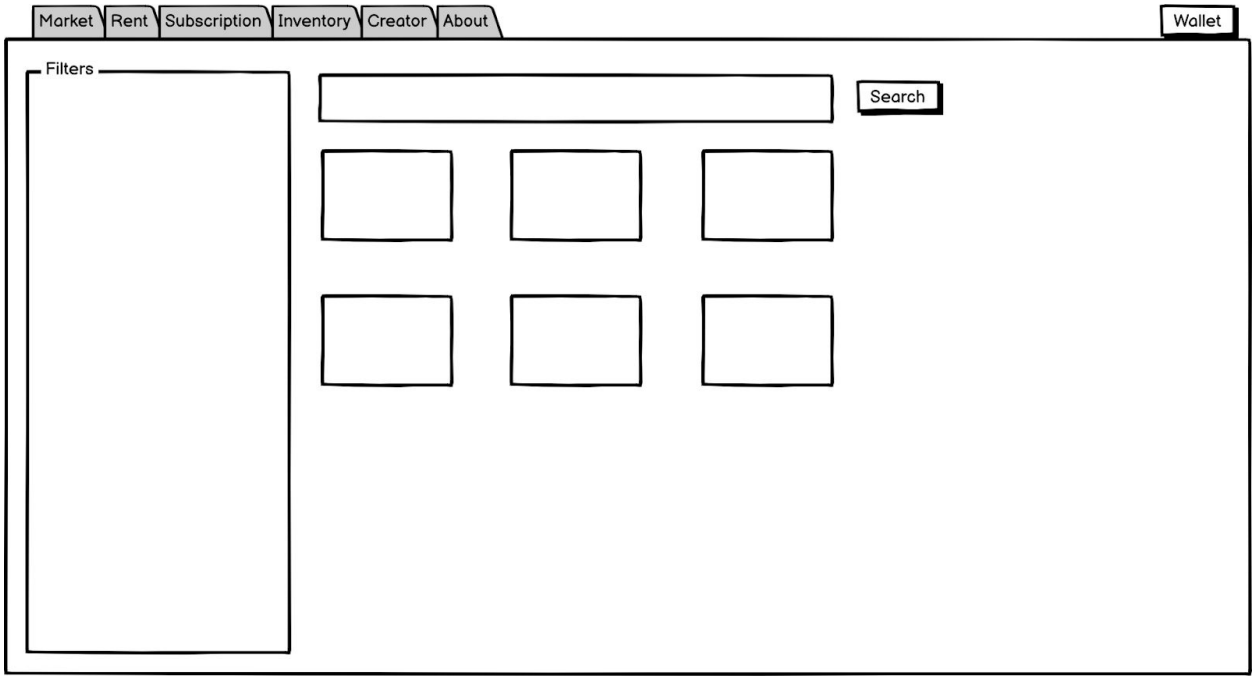
Main Market Screen



Options are:

1. Buy

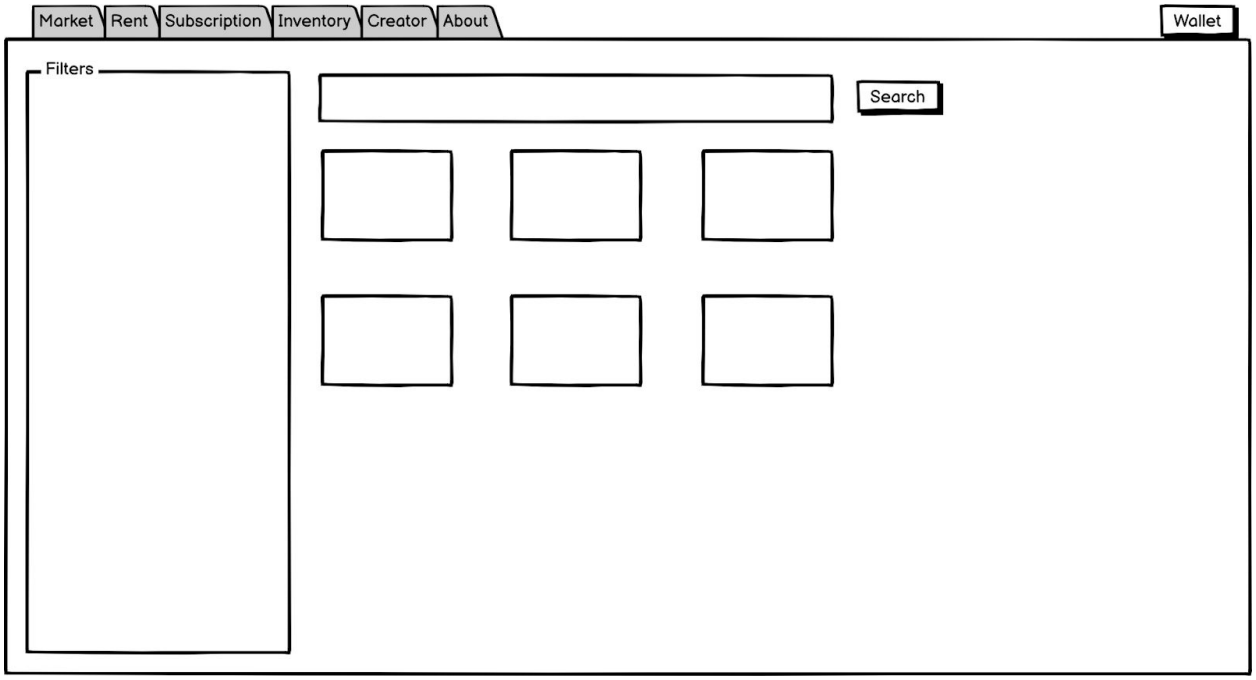
Inventory Screen (for contents you own)



Options are:

1. Sell (and set price)
2. Put on rent
3. Return rent

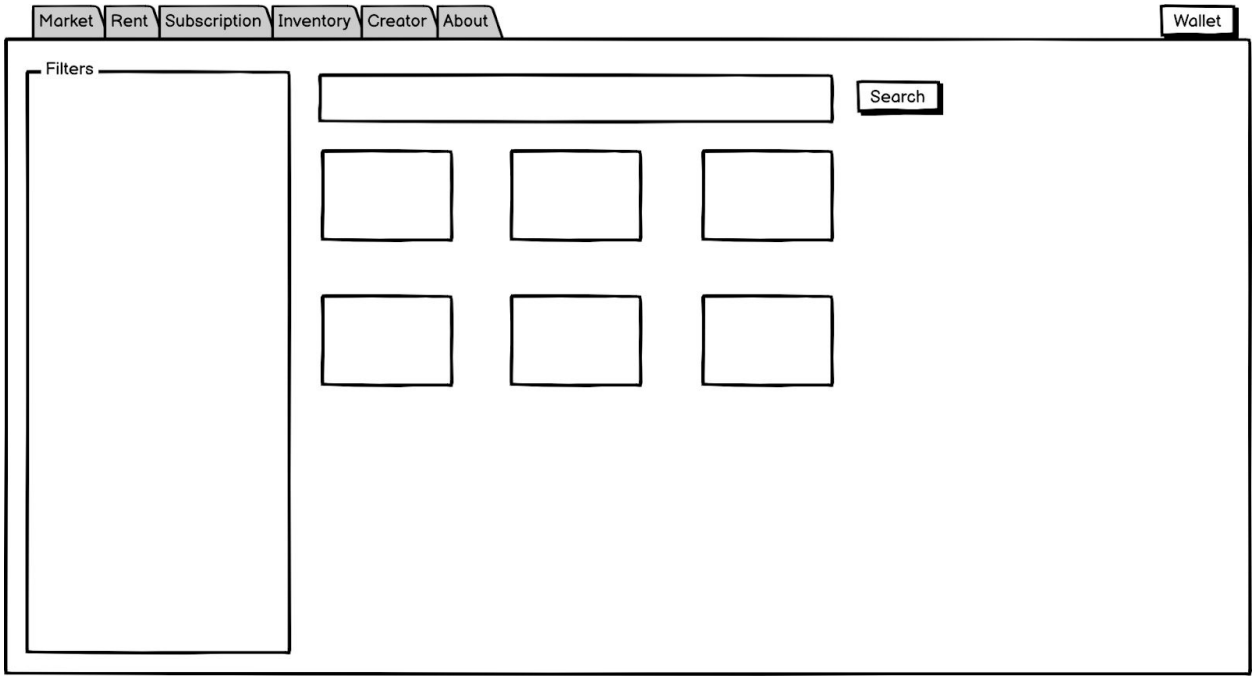
Rent Screen



Options are:

1. Rent

Subscription screen:



Options are:

1. Join subscription

Activity Diagram