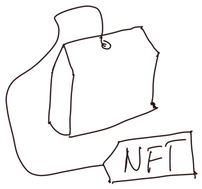
Proof of concept report

Tech we said we'll use:

- Solidity -> "BackEnd" business logic
- Metamask -> FrontEnd SEO
- Facebook Auth -> FrontEnd SEO
- IG API [1] -> FrontEnd Data Source
- Pinata IPFS Network -> NFT Data Cloud Storage
- Vue.js -> Shiny Things
- + Alchemy -> Blockchain Node connection
- + Truffle -> Local Node & Migration scripts



Based on the above, I think we can create the following task category:

- User Interface
- Instagram Integration
- Business Logic
- Migration (Smart contract deployment scripting.)
- Middleware (FrontEnd CRUD to the smart contract.)

All of these can have Setup, Development & Testing tags for organisation purposes. At this stage, it seems to me that we can develop and test categories separately from one another. That's good for productivity & bug reduction.

I've made a list of tasks that we probably won't be able to do without.

Task	Label	Tag
Create Vue project.	User Interface	Setup
Create Alchemy project.	Migration	Setup
Create Truffle project.	Business Logic	Setup
Create Pinata project.	Business Logic	Setup
Create online-hosted project (Heroku, AWS, etc.) ● The Facebook API requires a valid public URL.	Instagram Int.	Setup
Create Facebook API project. ● Add all team members as admins	Instagram Int.	Setup
Download Metamask Chrome Extension	-	Setup
Add vue-metamask.	Middleware	Setup

[1] We can start with the display API, and move to the graph API for Creator accounts later if we have time

Add vuex for state management (vue's redux).	User Interface	Setup
Add Vuetify for material-design compliant UI.	User Interface	Setup
Add Ethers.js.	Middleware	Setup
Add Facebook Login.	Instagram Int.	Dev
Create Instagram HTTP queries.	Instagram Int.	Dev
Create Instagram WebHooks.	Instagram Int.	Dev
Design (make) smart contract model.	Business Logic	Dev
Design UI pages	User Interface	Dev
Create login Page ● Force both Metamask & IG logins	User Interface	Dev
Create Profile/Collection Page ● Allow user to view NFTs ● Allow user to view IG content ● Allow user to turn IG -> NFT ● Allow user to place NFT for sale	User Interface	Dev
Create Market Page ● Allow user to buy/view listed NFTs	User Interface	Dev

I think this is sufficient foreshadowing for now. I don't think we'll do all of the above in the first sprint. IMO, our **first sprint MVP** should be something answering this user story:

" As an user, I would like to be able to log in to IG and to Metamask. I would like to view my IG content on my profile page and to be capable of turning that content into NFTs. "

For sprint 2, we could take care of:

"As an user, I would like to be able to place my NFTs for sale. I would also like to be able to acquire NFTs on the app's public marketplace."

We should come up with a (priority labelled) feature list. Things we can do with smart contracts include auctioning, funds pooling. -- just pitching ideas.

Some general things to consider

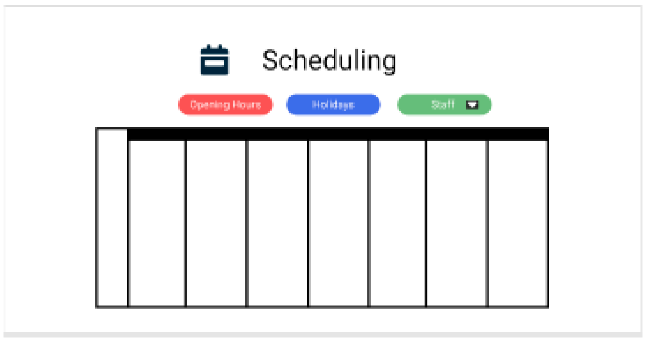
- We don't store our users, they hold their own accounts in their metamask wallets and they use that to interact with our business logic.
- As far as I can tell, we don't need to have a database. Solidity has a mapping data structure that can hold 2^256 entries. It can be used to handle our listings, we just have to model them properly. When we get there, we might want to watch this.

Some Business Logic things to consider

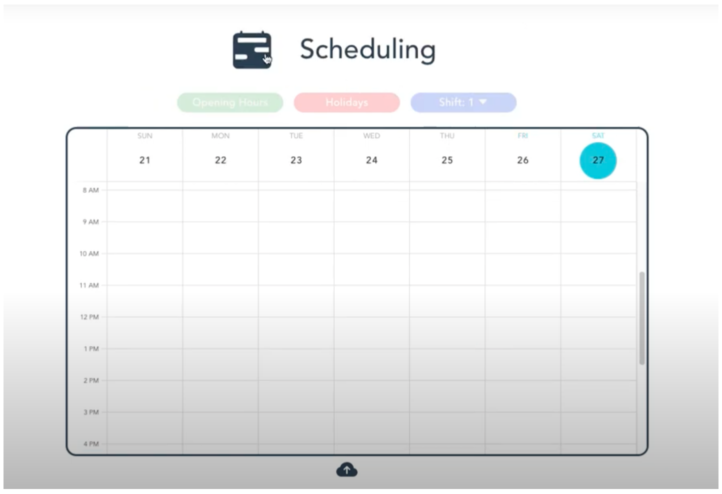
- Smart Contracts can delegate work to other contracts (enabling us to structure the project).
- AFAIK, smart contracts need to be built & deployed to the network every time they are changed.

Some User Interface things to consider

- We should leverage as many external libraries as possible. (Coding cute stuff from scratch is hard.) One thing I used in 321 is Vuetify, and it's Material-design compatible.
- I suggest we create designs in Figma before starting to write HTML/CSS. Even if it's just some bare-bone idea layout, it's easier to worry solely about the code when coding. E.g. for the 321 scheduling calendar, I had this in Figma:



Coded End result:


Scheduling
Opening Hours
Holidays
Shift: 1
SUN
MON
TUE
WED
THU
FRI
SAT
21
22
23
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8 AM
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