**FinTech Bootcamp Project 3**

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Everything is Due June 8th Codes and Presentations!

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**Lease Only structure:**

1. Tri-Party agreement - Owner, Leaving Tenant, Entering Tenant:

a. Shereef - Escrow structure - Contract B and Contract C to tie the two payment relations (company gets paid)

b. Landlord first tenant (assuming monthly rent is 1000) – [**Joseph & Ava**]

i. Dates - Exit dates

ii. 250 dollars (1/4 month of the tenants rent) 30 Day before - Payment of a % of last months rent as a payment for showing the place (Owner benefits from this structure)

iii. Early repayment of security deposit up to 15 days or earlier if new tenant comes (need to think about making sure apartment is in good shape before security is returned)

iv. 500 dollars (1/2 month of the tenants rent) 60+ Day before - Early notice exit reward option

v. [**TBD**] Early exit option (some thoughts - 50% of remaining rent or if existing tenant gets new tenant or pre-approved sublease tenant then rent is forgiven)

vi. Tenant option to provide photos of the place (we can offer if the tenant doesn’t want it)

c. Kevin - Landlord New tenant - Standard contract (Security deposit): [**Kevin**]

i. People moving in check if everything is ok ( and they have 15 days to confirm comfort) – Checklist

ii. Security Deposit

iii. Rent amount

iv. Flexiblity for multiple tenants

d. Economic relationship between Owner/Tenant to Us as a service provider [**Kebbin**]: Owner and us (also think about tenant paying for this service as a subscription)

i. Owner success fee

ii. Tenant subscription

Option A: Low Subscription + Low Success

Option B: Success Fee

Option C: High Subscription fee

2. Shereef - Front-end / Piniata concept / Github webpage

*Note: We need to understand what it costs to rent out space on the blockchain (****Joseph*** *can you ask your friend at Ethereum Foundation)*

**Failure Scenarios** [We need to discuss failure scenarios when we meet next time and start thinking them through for the coding]:

1. If current tenant just do not want to do it

Economics: Structure under which we get paid:

\* Increase customer retention

Resources [**Please insert the resources we will use below**]:

**PHASE II - Ideas**

If extra time then:

1. Auciton/Bidding concept

2. Who takes the photos of the place (students of photography school and upon success they get a small fee)

3. Diligence through checklist

4. Rating system of tenants / owners

5. Family watchdog

6. Security check - Like Plaid and tying into banking system

7. Linkedin Profile link for Owner

8. Guinea pig protection clause

9. Utility contract transfer

10. Saftey check of area and tenants in surrounding area (how do we build this into a blockchain contract)

**Extra Notes:**

1. Our company has to pay owner to show their house (only paid when actually sold or rented)

2. Get around broker by paying for low fees to have a free lancer show houses/book appointments as a replacement for borkers

3. Reward for those who introduce new supply that is not on the network

4. Approval by landlord

5. Transparency

6. Bidding process - transparency

7. Trust/Vetting process (broker advantage that needs to be thought through)

8. Standardizing the process

**Standardized Process:**

1. Security checks (tying banks in) - Tenant has levels of allowable rent amount

**Brainstorming Ideas**

1. **Blockchain for Real Estate**
   1. Disintermediation of brokers/brokerages in real estate
   2. Reduce administrative cost for property managers
   3. Improve property search process
   4. Ease leasing and subsequent property and cash flow management
   5. Transparent and relatively cheaper property title management
   6. Enable more efficient processing of financing and payments
2. **Tokenize Fund Investments**
   1. Reduce administrative and transaction cost of investing and managing a mutual fund or other fund structures (PE and HFs also apply here)
3. **Insurance**
   1. Apply smart contracts to automate premium payments and coverage specifications
4. **Create a DAO**
   1. Reduce inefficiencies in governance (cost, transparency, & speed)
5. **Create a DEX (Decentralized Exchange)**
   1. Trade and invest in a wide variety of traditional and non-traditional assets (real estate, derivatives, fixed income, alternatives, commodities, equities, currencies)
6. **REITS** (blend of 1 & 2)
7. **Resources**

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| **Section** | **Link** |
| Crypto | * <https://www.tokensets.com/> |
| Blockchain  Mortgage | * <https://github.com/rajivjc/mortgage-blockchain-demo/blob/master/contracts/Mortgage.sol> * <https://github.com/rshrimp/MortgageBlockchainFabric> * <https://aetsoft.net/solutions/blockchain-real-estate/?gclid=Cj0KCQjwzZj2BRDVARIsABs3l9J0va8P2rZ1crVp1T-cAWQ2Nk0M-x6YtWzbTIBlPPl-7he30zP1AUsaAvz1EALw_wcB> * <https://aetsoft.net/solutions/blockchain-real-estate/?gclid=Cj0KCQjwzZj2BRDVARIsABs3l9J0va8P2rZ1crVp1T-cAWQ2Nk0M-x6YtWzbTIBlPPl-7he30zP1AUsaAvz1EALw_wcB> |
| Insurance | * <https://aetsoft.net/solutions/blockchain-insurance/?gclid=CjwKCAjw8J32BRBCEiwApQEKgR-hQH9rhkKtigpoDaMdHV0RY2wCcPRF_l8i_Fyx2CH4n7OB8P12HRoCVK0QAvD_BwE> |
| Smart Contract | * <https://www.trufflesuite.com/tutorials/robust-smart-contracts-with-openzeppelin> * <https://docs.openzeppelin.com/learn/developing-smart-contracts> |

**Resources on Chatbot and Algo Trading (side-track)**

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| **Section** | **Link** |
| Chatbot | * <https://docs.aws.amazon.com/lex/latest/dg/example1.html> * <https://docs.aws.amazon.com/lex/latest/dg/fb-bot-association.html> * <https://aws.amazon.com/blogs/machine-learning/deploy-trained-keras-or-tensorflow-models-using-amazon-sagemaker/> |
| Machine Learning | * <https://machinelearningmastery.com/sequence-classification-lstm-recurrent-neural-networks-python-keras/> |
| Algo Trading | * <https://medium.com/analytics-vidhya/stock-trend-prediction-with-technical-indicators-feature-engineering-and-python-code-1fa54d5806ba> |