

BLOCKGYM

with FLEXcoin

Team: Catherine C, Rachel B, Michael C, Kevin B, Vic G.

The Problem:



The traditional fee-based membership plan for gyms is inconvenient, inefficient, and lacks functionality that can be enabled by new technologies such as blockchain. The gym is an ecosystem with a range of services and products which are not seamlessly integrated into the gym visit.

The Solution:

A gym membership system which runs on blockchain and utilizes a custom minted token for all related transactions. Tokens will be spent to gain access, use premium amenities, purchase merchandise, and purchase other services of value.

The availability and transparency of transaction data on the blockchain, provides valuable insight on behavior and spending, for the gym and its clients. For this project, we will focus on an application which leverages transaction data to fluctuate the pricing for gym access based on the volume of visitors the gym is experiencing at that time.

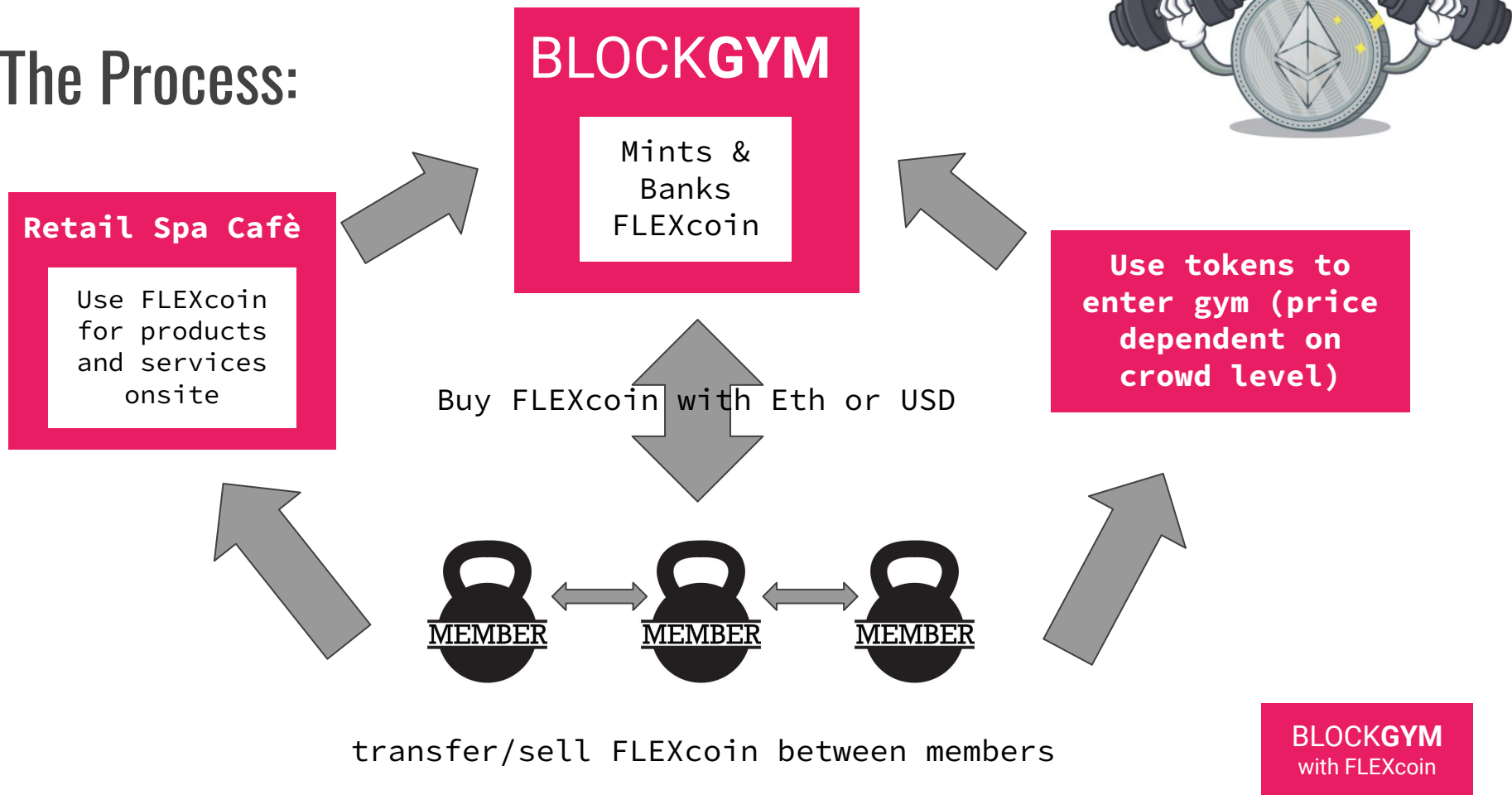
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But WHY Blockchain for the Gym?

WHY?

- **Motivate people to go to the gym** by having a **goal of at least using up the minimum membership tokens** per month (50 tokens)
 - Per 2022 data, obesity among adults aged 18+ is at a ratio of 33 people per 100 individuals (IBISWorld, 2022)
- Motivate users to **go to the gym at slower times by offering a cheaper check-in** token price when the gym is less busy
 - Reduces the after-work crowd at the gym
- **Easy to add promotions** (i.e., earn tokens for checking in x number of times/month, earn tokens for doing x number of group fitness classes/week)
- **More secure transactions:** decentralized application
- **Traceable actions:** how many times users went to the gym each month, what items were purchased, etc.
- **Future applications** (i.e., can use token at any “BlockGym” across the US and internationally)

The Process:



Technologies used:



SOLIDITY

Smart Contract written and deployed
in Solidity using Remix



Ganache

Personal Ethereum blockchain used to deploy the smart contract,
generate test accounts and manage transactions



METAMASK

Wallet used to manage accounts and to import custom
token asset



Streamlit

Application front-end user interface

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Project Demonstration:


Demonstration using Streamlit, Ganache, and MetaMask



BlockGym Store

Select an Item

Towel



Select Quantity of Item:

2

1 50

The price of this item is: 2 tokens

2

The Item(s) You Selected Cost: 4 tokens

FlexCoin for the BlockGym

FlexCoin incentivizes you to come to the gym at a time when it is not too busy, so that you can access the equipment you need now to flex your muscles later.

Choose your account to get started

Select Account

0xe48996eF670639b719A494da88e06985B582fa21

This address owns 146.0 tokens.

Membership Costs

Each month, members must purchase and use at least 50

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Unanticipated Insights and Solutions:



- Not sure if we can connect all the platforms together
- Connect Metamask and mint coins
- There is no “undo” button for the real blockchain.
- Difficulties getting our “transfer” function to work
- There are a lot of underlying libraries to coordinate for this project

Next Steps:



- Put the changing price on the blockchain based on the number of people
- User interface, where there are interfaces for
 - the server (e.g. on the back office) and
 - the client (e.g. on the cellphone)
- Add ability to transfer tokens between members
- Have promotional periods where the gym rewards members with tokens when they complete certain gym feats
- Users have an ability to buy or sell their own Gym-related NFT
- Ability to award an NFT for customers when they:
 - Come to the gym for x number of days in a row
 - Refer x number of people in the past month

Results and Conclusion:



- Created a Minimum Viable Product for Gym companies
- Future applications of this idea - can be applied to different industries (e.g., season ski pass, nail and hair salons, amusement parks, etc.)
- Learned about the connection between different platforms: Ganache, Remix, Streamlit, MetaMask, etc.
- Questions?

Resources

IBISWorld. (2022, January 20). *Adult Obesity Rate*.

<https://www.ibisworld.com/us/bed/adult-obesity-rate/112885/#:~:text=Over%20the%20five%20years%20to,as%20over%20the%20long%2Dterm>.