Project Deliverable H

Prototype III and Customer Feedback

GNG 1103: Engineering Design

Section #A02

Group #6

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Introduction

We presented our second prototype last week and got some feedback from customers. We encountered some difficulties with this prototype, and we are now trying to connect all the subsystems together. Including cryptocurrency and user pages, and links to merchant pages in use. For this prototype, we focused on cryptocurrency codes and merchant pages. At the end of the document, we will show our test plan for prototype 3.

Prototype III (The Blockchain and Crypto)

For Zeyad's Prototype (The Crypto Token Prototype):

The focus of this prototype was to create the prototype in itself, whereas the stage before was understanding how to create it better and planning out how to test it. **So, in this prototype stage we have completed creating the token.**

First, we will address some questions and explain:

1.) How was the prototype created?

We implemented the ERC20 interface, and we created our own token using Solidity. (Solidity is an object-oriented programming language for smart contracts. It is used to implement smart contracts on a blockchain platform such as Ethereum).

2.) How was the token tested to see if it was created?

The address of the contract was copied and pasted into Etherscan, to check if it recognizes the token's creation. The Etherscan showed that it does recognize the ERC20 token that we have created.

3.) How will we give the token its value?

Like any currency, cryptocurrencies gain their value based on the scale of community involvement. Cryptocurrency gains value if the demand for it is higher than the supply. When a cryptocurrency is useful, people want to own more of it, driving up the demand. Since people want to use it, they don't want to sell it. Seeing as to how banks will be running this, and everyone uses banks and the "points" that banks assign, it can be concluded that people will basically be forced to use this new form of "points" and therefore driving up the value of the points and people will want to use it more often after they see how much this new way has democratized.

4.) What functions were included in the code of the token?

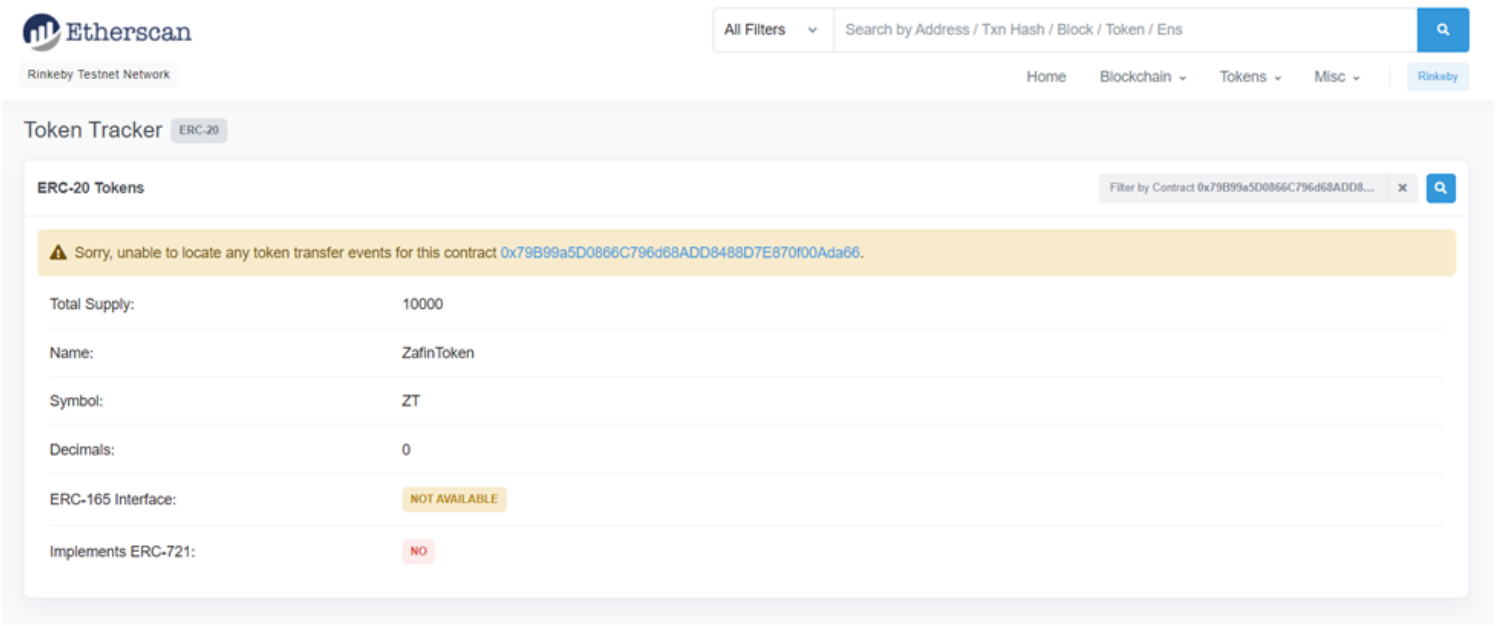
Some of the most important functions created are: "balanceOf", which checks the balance of a person's given address to their virtual wallet. Another important method or function is "transfer", which transfers tokens from one place to another.

Objective achieved for current stage of the prototype:

Sample Code for the creation of the token:

```
import "./EIP20Interface.sol";


contract ZafinToken is EIP20Interface {

    uint256 constant private MAX_UINT256 = 2**256 - 1;
    mapping (address => uint256) public balances;
    mapping (address => mapping (address => uint256)) public allowed;
    /*
    NOTE:
    The following variables are OPTIONAL vanities. One does not have to include them.
    They allow one to customise the token contract & in no way influences the core functionality.
    Some wallets/interfaces might not even bother to look at this information.
    */
    string public name;                   //fancy name: eg Simon Bucks
    uint8 public decimals;                //How many decimals to show.
    string public symbol;                 //An identifier: eg SBX

    function ZafinToken(
        uint256 _initialAmount,
        string _tokenName,
        uint8 _decimalUnits,
        string _tokenSymbol
    ) public {
        balances[msg.sender] = _initialAmount;               // Give the creator all initial tokens
        totalSupply = _initialAmount;                        // Update total supply
        name = _tokenName;                                   // Set the name for display purposes
        decimals = _decimalUnits;                            // Amount of decimals for display purposes
        symbol = _tokenSymbol;                               // Set the symbol for display purposes
    }

    function transfer(address _to, uint256 _value) public returns (bool success) {
        require(balances[msg.sender] >= _value);
        balances[msg.sender] -= _value;
        balances[_to] += _value;
        emit Transfer(msg.sender, _to, _value); //solhint-disable-line indent, no-unused-vars
        return true;
    }

    function transferFrom(address _from, address _to, uint256 _value) public returns (bool success) {
        uint256 allowance = allowed[_from][msg.sender];
        require(balances[_from] >= _value && allowance >= _value);
        balances[_to] += _value;
```

Etherscan's recognition of our ZafinToken to test if the token was created:



Analysis and results for objective of this crypto prototype and test method:

The token has been created by implementing the basic ERC20 interface, which was seen in deliverable G, and as seen in the screenshot of the sample code you can see that we have finished the code for creating the actual token (only some functions aren't included in the screenshot above). The token was tested by copying the contract address and searching it on the Etherscan search for ERC20 tokens.

Regarding feedback (for crypto):

We have asked Zeyad's cousin if the functions of the token that we have created are enough (for the basic goal of this project) and he said that they are, and that the most crucial ones to have is the "balanceOf" and the "transfer" functions.

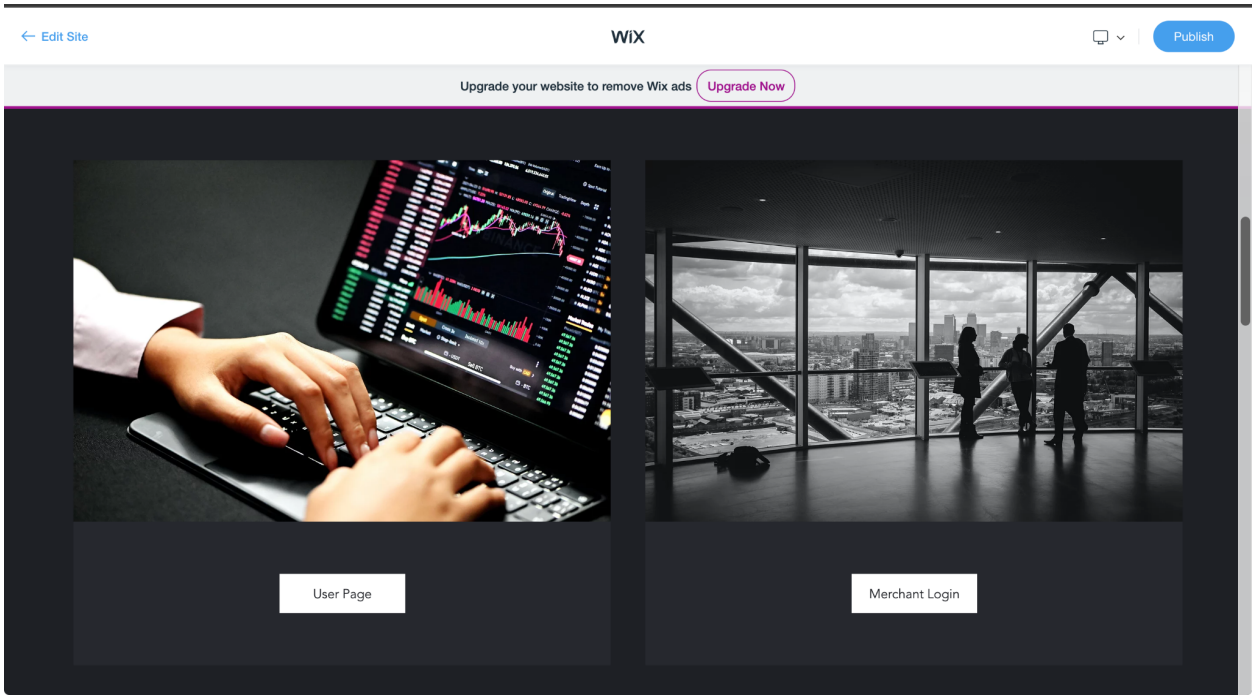
Going forward for design day (for the crypto part):

We have this subsystem completed but we have yet to connect it to the software and make it into one. We have talked to the TAs and the PM and they said that we don't need to have connected the crypto part to the software, but we must be able to show what we have created and how it works. We will also have to come up with an idea to at least show that we know how we will connect the crypto part to the software that we have created with its features.

So, our goal for this crypto part: By design day we will have come up with an idea to show how we will connect both the crypto and the software together, to show that we at least know how to do it. (We will not actually implement it due to time constraints)

Homepage

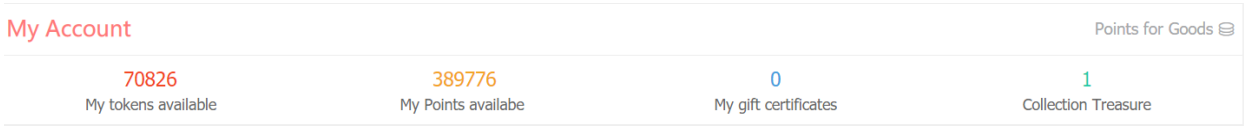
The Homepage is just used to identify entries to " User Page" or " Merchant Page".



In the second prototype you were not able to access the actual user and merchant page. We were given feedback to implement a way to access the pages from the home page. We created a button on wix that will take you to sites through their web link. Through the test, the merchant page can be successfully linked with the homepage. But we are still looking for ways to link the user interface, because the user interface uses a different program for programming. So you need to publish the user interface first, and then add a link to the "user" button.

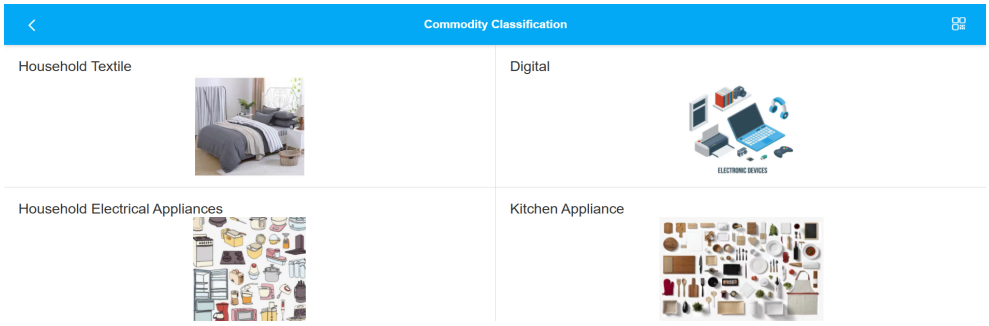
User Page

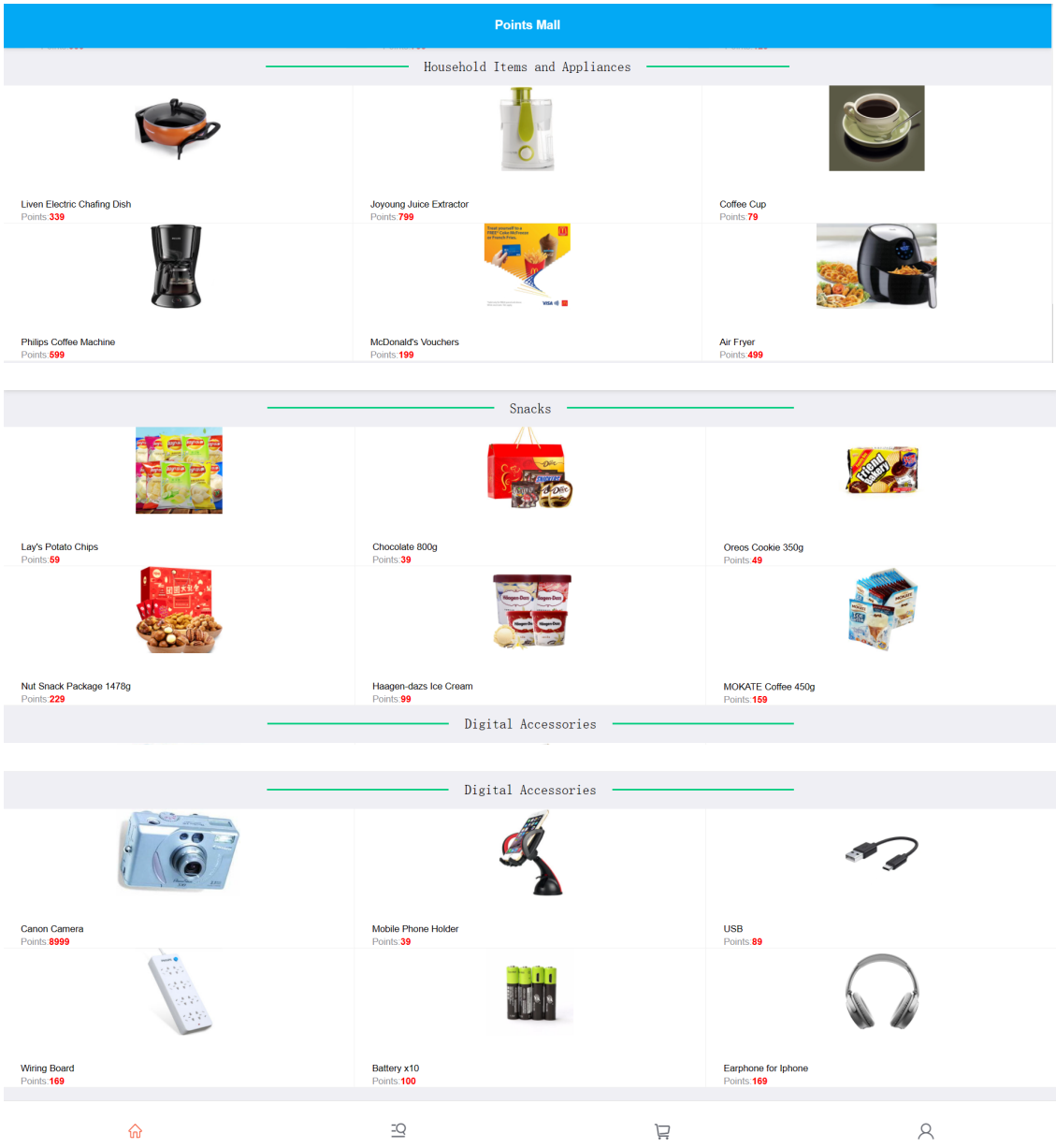
Based on customer feedback from last week and our further discussions, we updated the design of the web page to allow users to use more tokens instead of points. Points are only used as rewards for users. We can still use points to redeem goods on the platform.



Now the account information displayed on the "ME" sub-page of the user page is not only available points. The available tokens will also be displayed. The number of tokens depends on the implementation of the code in the cryptocurrency. Our account page is an upgraded version of the prototype "Management" page. This change is because in the last customer feedback, we suggested that we make each function more intuitive. Therefore, when we open the "My Account" page, we can directly see the available points in the account. And the product information that has been redeemed. We still set up the "logistics information" function. If there is a chance to cooperate with a logistics company in the future, users can also see the logistics information of the goods here. "Token" function We are trying to link with cryptocurrency, but there is a loophole in the code of the token part, and we are trying to fix it.

The user page can send points to contacts, redeem points and other functions. In addition, we can intuitively see the products in the mall that can be redeemed with points. Since we changed some "modes" all, the feedback we got in prototype 2 "adding the search box" became unnecessary. Because now, "points" are just a kind of welfare, and only a small amount of goods can be exchanged through points. Therefore, the meaning of the search box is not necessary. In addition, we can intuitively see the commodities that can be exchanged in the mall. Redeemable products will still be viewable by category.

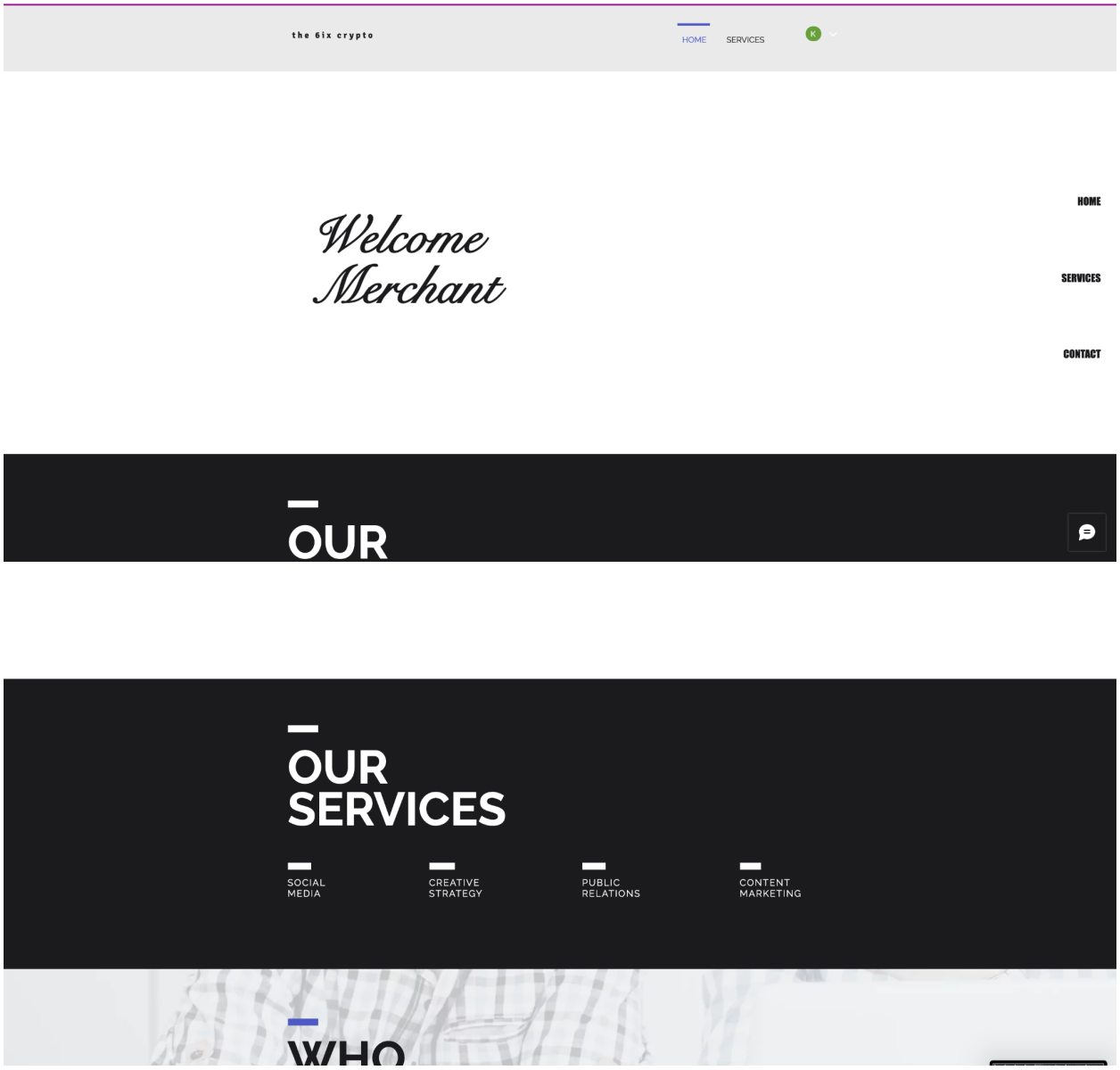




Merchant Page

For the merchant we added a private page for the merchant to see. The page is called point and it is located at the account profile side. It can help give you what tokens you

have or what tokens you owe to the bank. We also made the design of the page to a sort of minimalist template from the other website benchmarked and feedback.



GET IN TOUCH

Enter Your Name *

Name

Enter Your Email *

Email

Enter Your Subject

Subject

Enter Your Message

Message

Submit

We can't wait to hear from you

500 Terry Francois Street,
San Francisco,
CA 94158

info@mysite.com
123-456-7890

WHO WE ARE

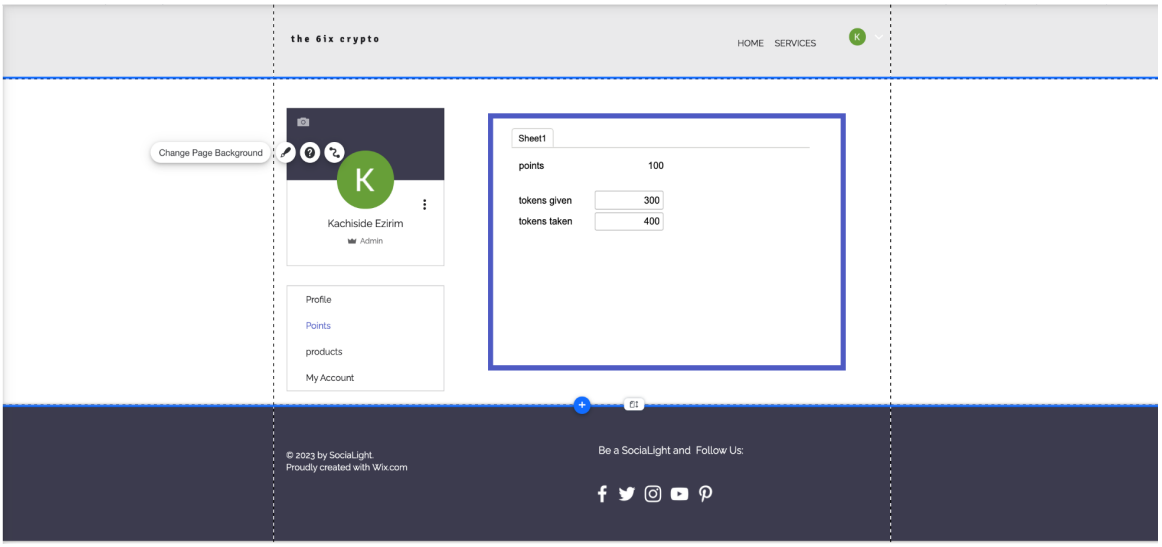
this is the merchant page. it gives people the opportunity to start a business and to get loyal customers. this platform helps to advertise products and with the points/token gives the merchant the chance to reward the customer for purchasing their product

HOME

SERVICES

CONTACT

GET IN TOUCH


the 6ix crypto
HOME SERVICES
Change Page Background
K
Kachiside Ezirim
Admin
Profile
Points
products
My Account
Sheet1
points 100
tokens given 300
tokens taken 400
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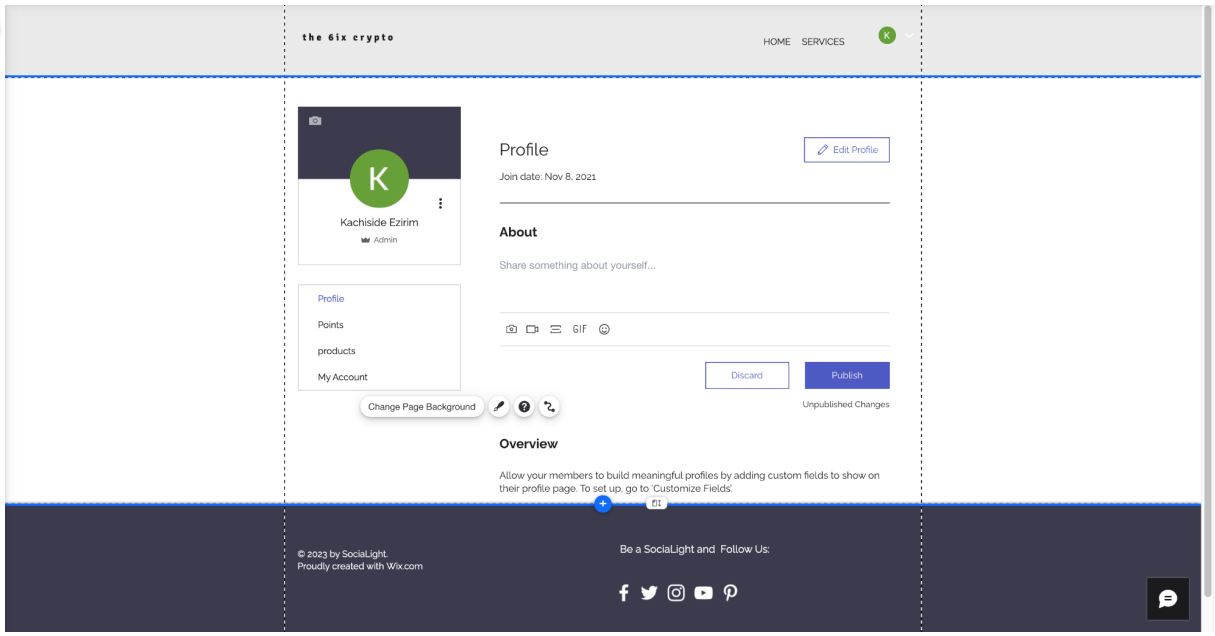
the 6ix crypto
HOME SERVICES
K
Kachiside Ezirim
Admin
Profile
Points
products
My Account
Change Page Background
Profile
Edit Profile
Join date: Nov 8, 2021
About
Share something about yourself...
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Customer Feedback

The feedback this time is more from our classmates and teachers. Because of the last customer meeting 3, we did not get a lot of feedback from customers. But in the speech last week, we got questions from teachers and many classmates. Some of them think that the use of "cryptocurrency" and "tokens" is absolutely absurd, because its value will change as the market changes. But when we first designed it, we thought it was safe. Because just like when Bitcoin and other cryptocurrencies first appeared, security and anonymity were the two most important principles. Although with the rapid development of cryptocurrency, some companies began to attack cryptocurrency exchanges for profit, but in fact this is not an inherent risk of cryptocurrency. These risks are more for exchanges than banks. Our design concept is that tokens will be issued and managed entirely by banks. Because the bank will be much safer.

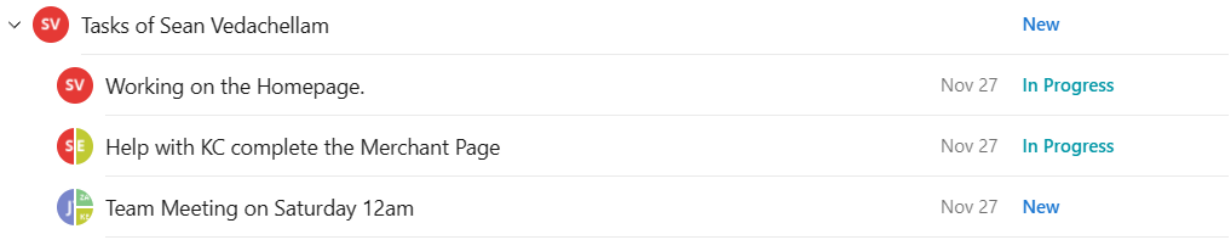
Test Plan for Final Product

Test ID	Test Objective (Why)	Description of Prototype used and of Basic Test Method (What)	Description of Results to be Recorded and how these results will be used (How)	Estimated Test duration and planned start date (When)
1.	Token Code	Whether the code in the "tokens" part can work normally.		
2.	Home page and user page connection.	We are looking for ways to publish the code executed on DREAMWEAVER as a web link. Once successful, we can add the link to the "Users" button.	If we click the "User" button on the homepage, we can successfully jump to the user interface. When we click the "Business" button on the homepage, we can jump to the business page. If the above operation is successful, we can say that the link is successful.	1 days
3.	The points of different businesses can be converted to each other	Try to convert points between two businesses.	If the points in merchant A can be successfully used in merchant B. Then the function of converting points among different businesses will be successful.	2 days. We will begin when we finish both the merchants part and the user part and also connect them together.

Wrike Plan Updated

- For Sean Wrike Plan

  https://www.wrike.com/open.htm?id=760256851



- For KC's Wrike Plan

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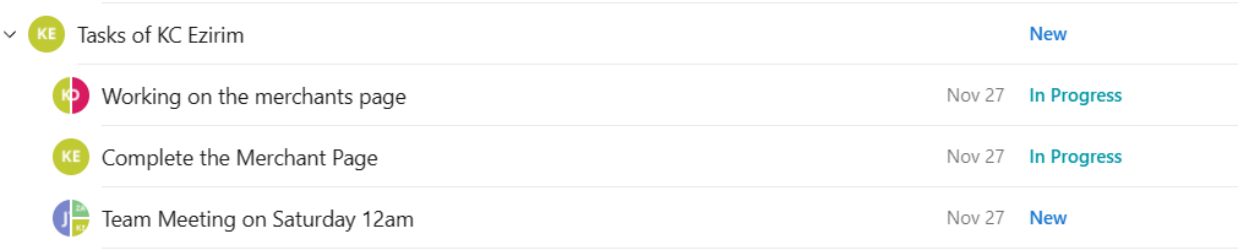

- For Jieying's Wrike Plan

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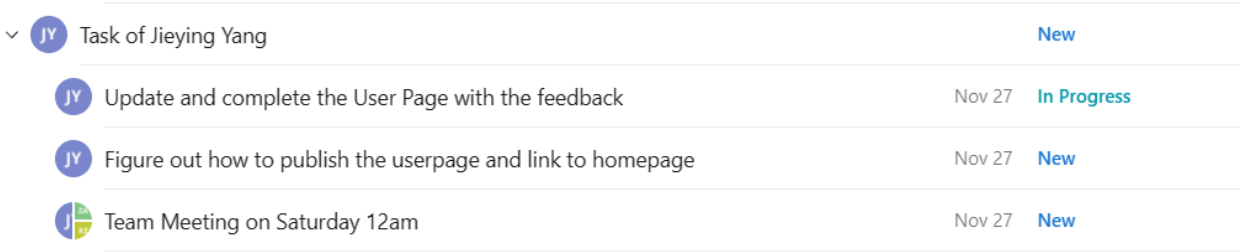

- For Zeyad's Wrike Plan

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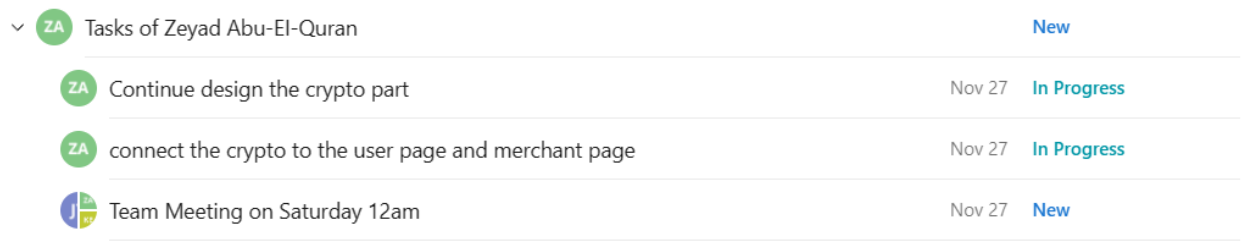

Conclusion

The purpose of creating the third prototype is to update and improve our design, and to improve our design based on the testing of the second prototype. We can focus more on our subsystems, and we can design together in a more coherent way. Based on customer feedback and suggestions, we will be able to make improvements in these areas next time. The final product will continue to focus on the cryptocurrency part, and successfully link all the designs together to ensure that they work properly. But if they cannot be linked, we will explain how they can link and work.