HW2: Requirements, GUI, Pipe Design (167.5pts)

Replace all the highlighted placeholder text, below. You may change the style of this template, but please provide all the responses requested and keep the same sections / order.

Usability note: If you double-tap/click the placeholder text, that text should become selected so that you can easily type over it.

Your Team Name (0.5pt)

Which team are you on?

Asia Pacific Region Team

Project Description (5pts)

Who is the **target audience** of your software?

My application will target users who are familiar with using cryptocurrencies and those who need to translate words used in my teammate Jaq's service.

What is the **purpose** of your software? (e.g., what problem does it solve?)

It furthers the spread and adoption of cryptocurrencies. But, more practically, it offers a decentralized and anonymous medium of sending and receiving payments. Our privacy and data have now become commodities to be sold and traded, without our consent. This is a way to opt out.

What **service** will your software **provide**?

Payment Transaction Service

What **service** will your software **use**?

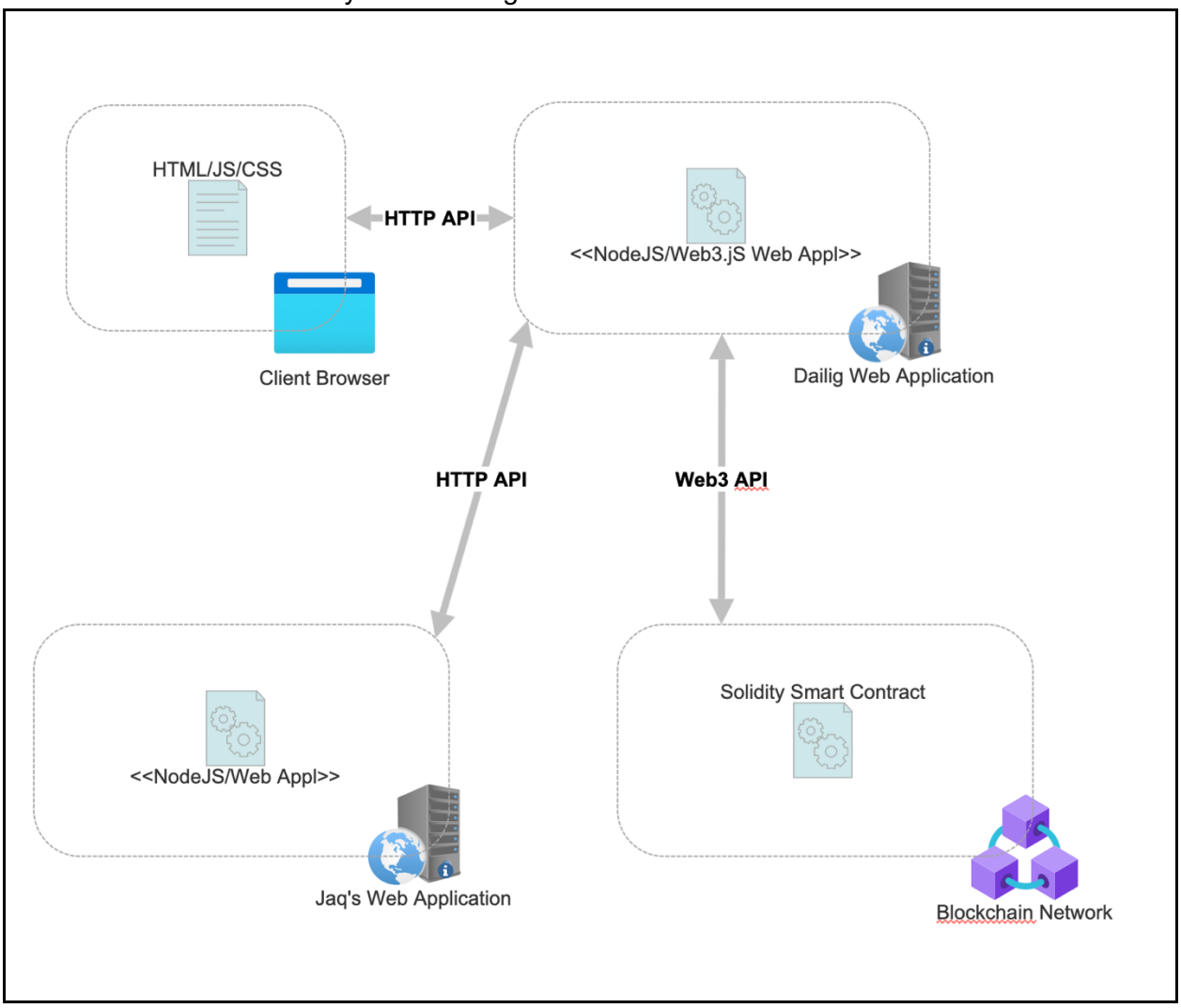
Translation Service from Jaq's microservice

High-Level Architecture (5pts)

Instructions

- Sketch/diagram the high-level architecture of your project
- Label each component

- Label each connector
- Include the services you'll be using



Microservices Pipe (5pts)

What ONE approach will your team use for microservices communication? Remember you cannot call each other's code directly.

HTTP API, specifically POST/GET Requst to our web applications

Functional Requirements (30pts)

Instructions

- Write at least three functional requirements for your project
- Use EARS (don't need to use Planguage)

- Say which EARS pattern you're using

Requirement	EARS Pattern
When a User enters their Wallet Address and 'click' on verify funds, my application return and display the amount of crypto they have available	*Event-Driven*
When I receive a payment transaction request, which consists of they buyer's wallet address and the seller's address, my application will transfer funds from the buyer to the seller and send the buy confirmation of the transaction and an update of the balances of the buyer and seller's available funds.	*Event-Driven*
My application shall use the Web3.js library to communicate with a blockchain network.	*Ubiquitous*

Non-Functional Requirements (30pts)

Instructions

- Write at least one non-functional requirement for YOUR project
- Write at least two non-functional requirements from the quality attributes your TEAM agreed were important for integrating projects
- Include quality attributes

Quality Attribute	Requirement
Accuracy	*All transactions (100%) that deduct and deposit money into an account must be correct, Deducation/withdrawal amount must be equal to the service cost, plus mining fees, if applicable.*
Interoperability	*Every provider must have a least 1 HTTP API to enable communications between our services.*
Usability	*Every Form field and button must have an additional info icon to display instructions or information to the user.*

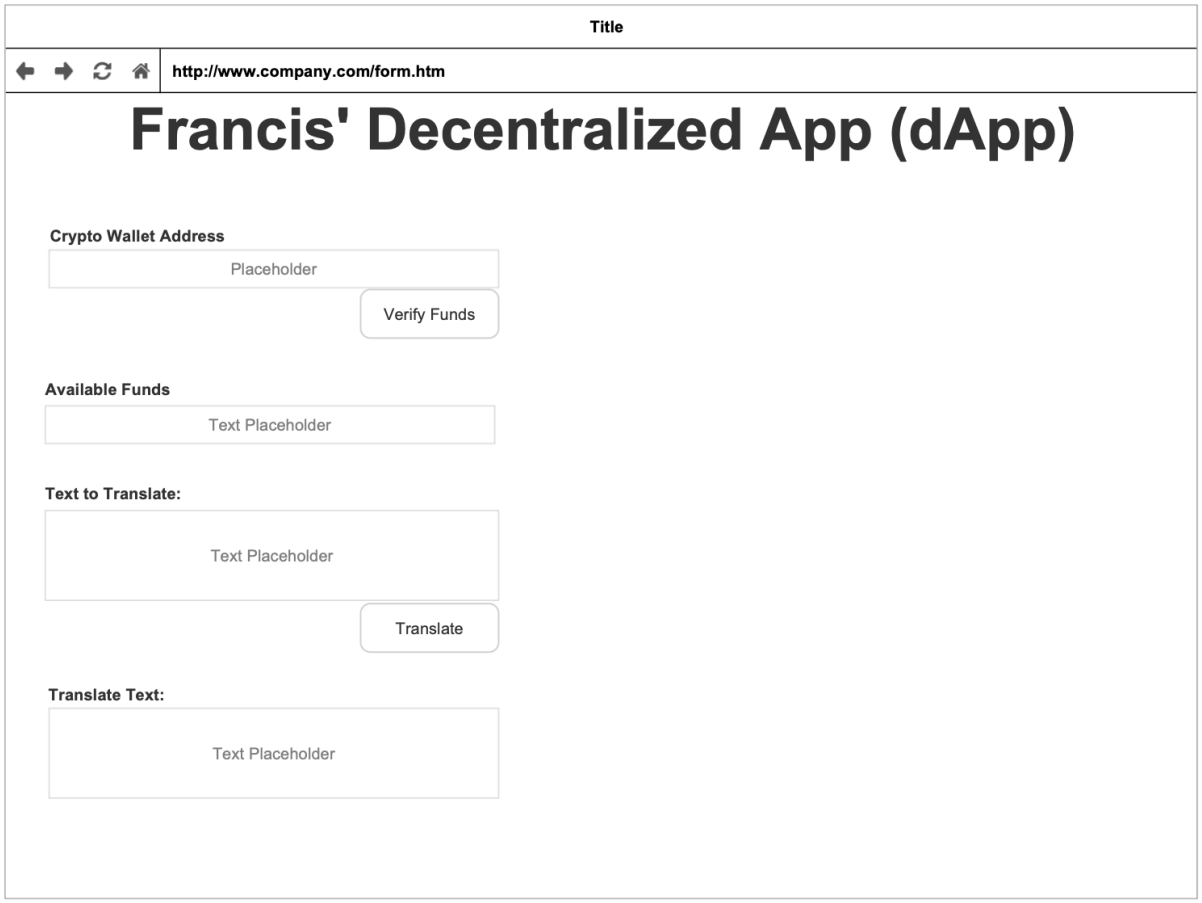
Paper Prototypes Second Draft (36pts)

Instructions

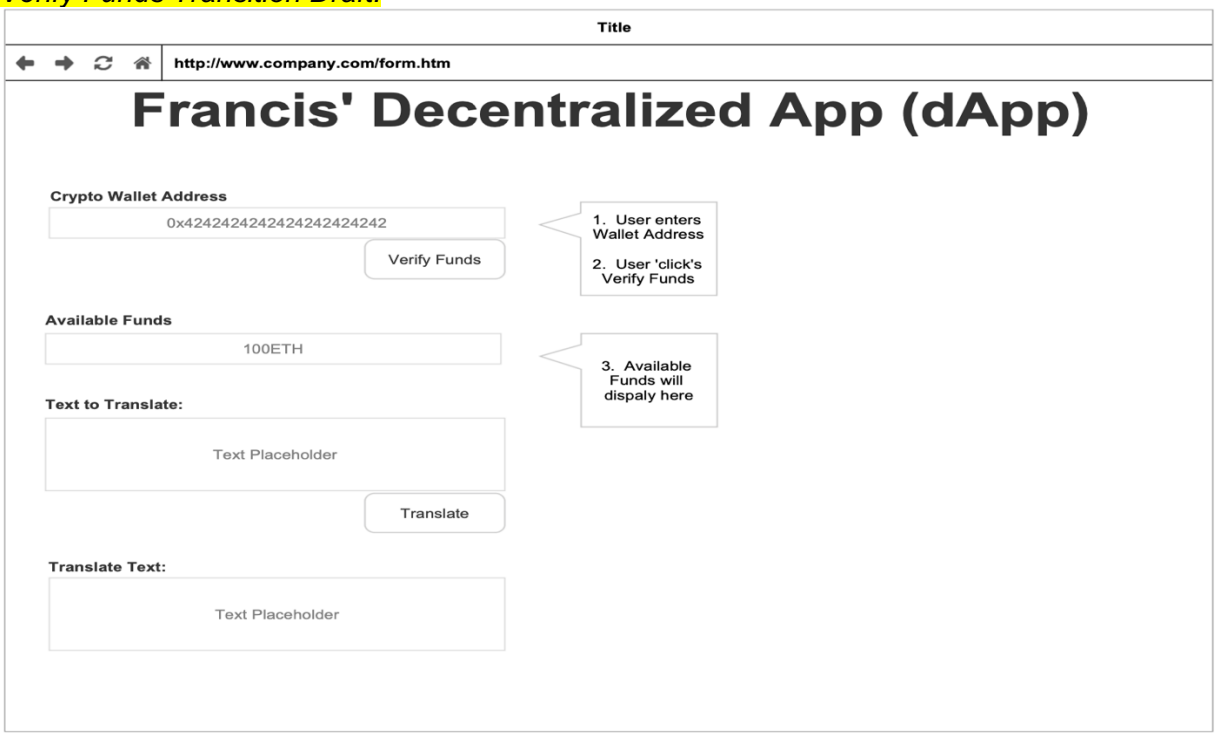
- Create a second draft of your entire project.
- Medium fidelity or higher
- Show how the software will look in all states. You may need to create multiple drawings.
- Indicate how the software moves between states and how users interact with it.
- Provide screenshots/images or scans of your prototype.

Second draft of paper prototypes:

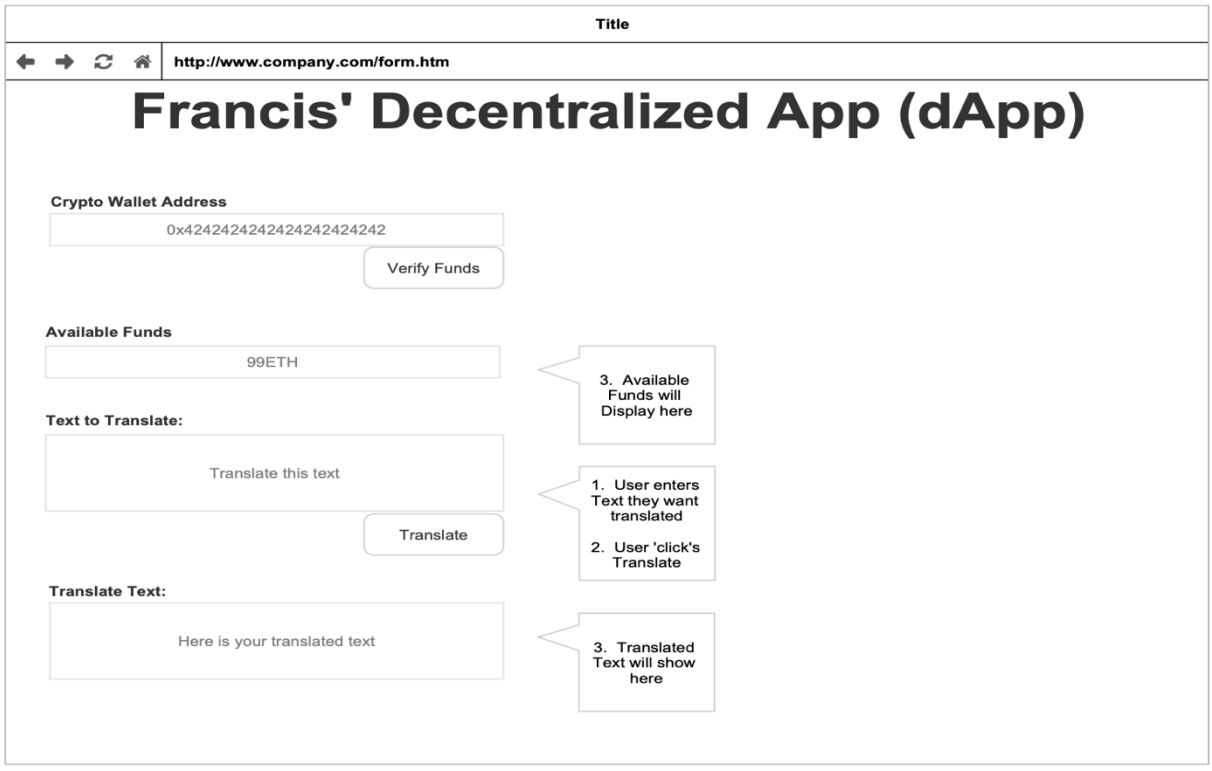
Base Page Second Draft:



Verify Funds Transition Draft:



Translate Transition Draft:



Paper Prototypes Usability Evaluation (36pts)

Instructions

- Evaluate your paper prototypes against all eight Cognitive Style Heuristics. Two or more sentences for each heuristic. Be specific.

Heuristic	**How your user interface design does or does not reflect the heuristic**
CSH#1	*My Application first draft does not meet this heuristic, it does not have any dialog that explains what is being done. I will update to include 'help' icons that explains each form input.*
CSH#2	*My Application does not meet the second heuristic of explaining the cost of using my program. Will need to add a paragraph that explains why they would use cryptocurrency over a a credit card.*
CSH#3	*My Application first draft does not meet the third heuristic of allowing people to research information. I will likely add links to cryptocurrency resources: how to create a wallet, what is cryptocurrency, how decentralized apps (dApps) work, etc.*
CSH#4	*Don't think this applicable to my project. This heuristic assumes that I updated a feature. This will be a completely new application.*
CSH#5	*Transaction on the blockchain are not reversible. Once they 'click' the 'translate' button, they will not be able to undo the transaction. I will need to provide sufficient warning , perhaps require that they click the 'translate' button twice.*
CSH#6	*I think my application satisfies because it's fairly simple. There are only two features for my application: Verify Funds and Translation.*

CSH#7	*My application does not satisfy this heuristic. Because my application is simple – 1 webpage – there aren't numerous way to tinker with it. Most of the complex stuff is on the backend. Since this is a prototype, my plan was to have a drop down of test crypto addresses that I could create. I could add a another form field that allows users to enter their address manually.*
CSH#8	*My first draft of the application did not incorporate this. My application is fairly simple. I could add some hyperlinks further explaining crypto and dApps.*

Paper Prototypes Third Draft (20pts)

Instructions

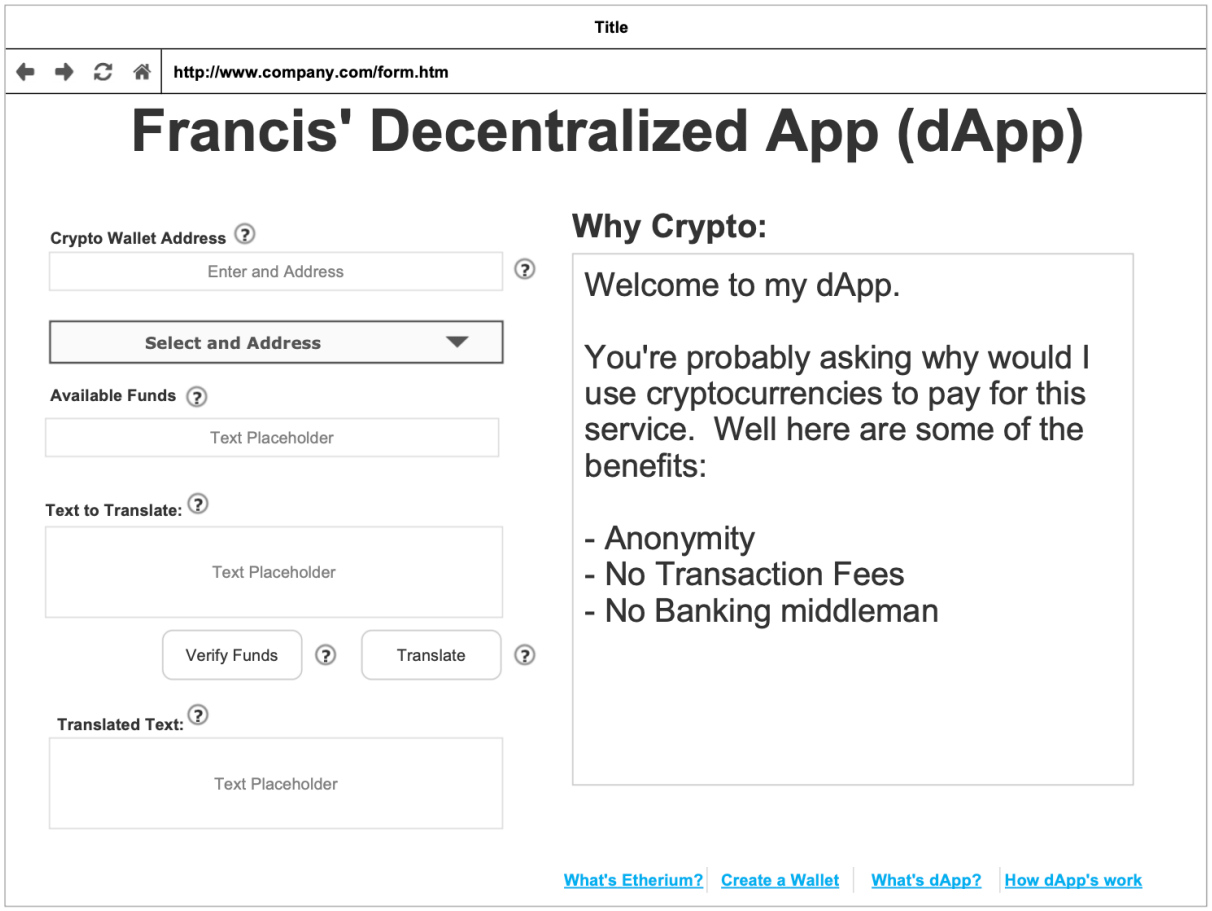
- Revise your paper prototypes so they reflect all eight CSH
- Medium fidelity or higher
- Explain what you did. One or more sentences each. Be specific.
- Provide screenshots or scans of your revised paper prototypes. Point out what changed on the prototype itself (using arrows, circles, highlighting, etc.).

Heuristic	**Change you made based on evaluation**
CSH#1	*Added a section to my page that explains why someone would want to use cryptocurrencies. Added 'help' icons that will explain what each form input field is for and what each button does.*
CSH#2	*I added 'help icons' to each form input and button to explain what each does or what is required. Also added links that explain how to create a crypto wallet, what cryptocurrencies are, how dApps work.*
CSH#3	*Help icon added, which will pop up dialog to help users research as much as they want. Also added useful links for users that want to research more.*
CSH#4	*Not really sure how this applies because it asks to keep new features familiar. This assumes that I'm improving on an already existing product – I am not. I suppose web*

	forms and button are familiar, since it's prevalent in almost all websites.
CSH#5	*I cannot implement an undo feature for transaction. However, I will try to prevent them, my website will pop up a warning informing the user that the transaction on the blockchain is not reversible before they click the 'translate' button.*
CSH#6	*No change from previous draft. The portion of my application that user interacts with is very simple: 1) Enter an Address; 2) (optional) click verify funds; 3) click translate*
CSH#7	*I added a drop down box, in addition to a form input field for user input. This will allow the user to either enter in their address if they know it, or to select from available addresses.*
CSH#8	*Added an alert pop up when they do more research/tinker. If a user decides to do more research/tinker, by clicking on the hyperlinks, they will be alerted that they will be redirected to another webpage.*

Revised paper prototypes:

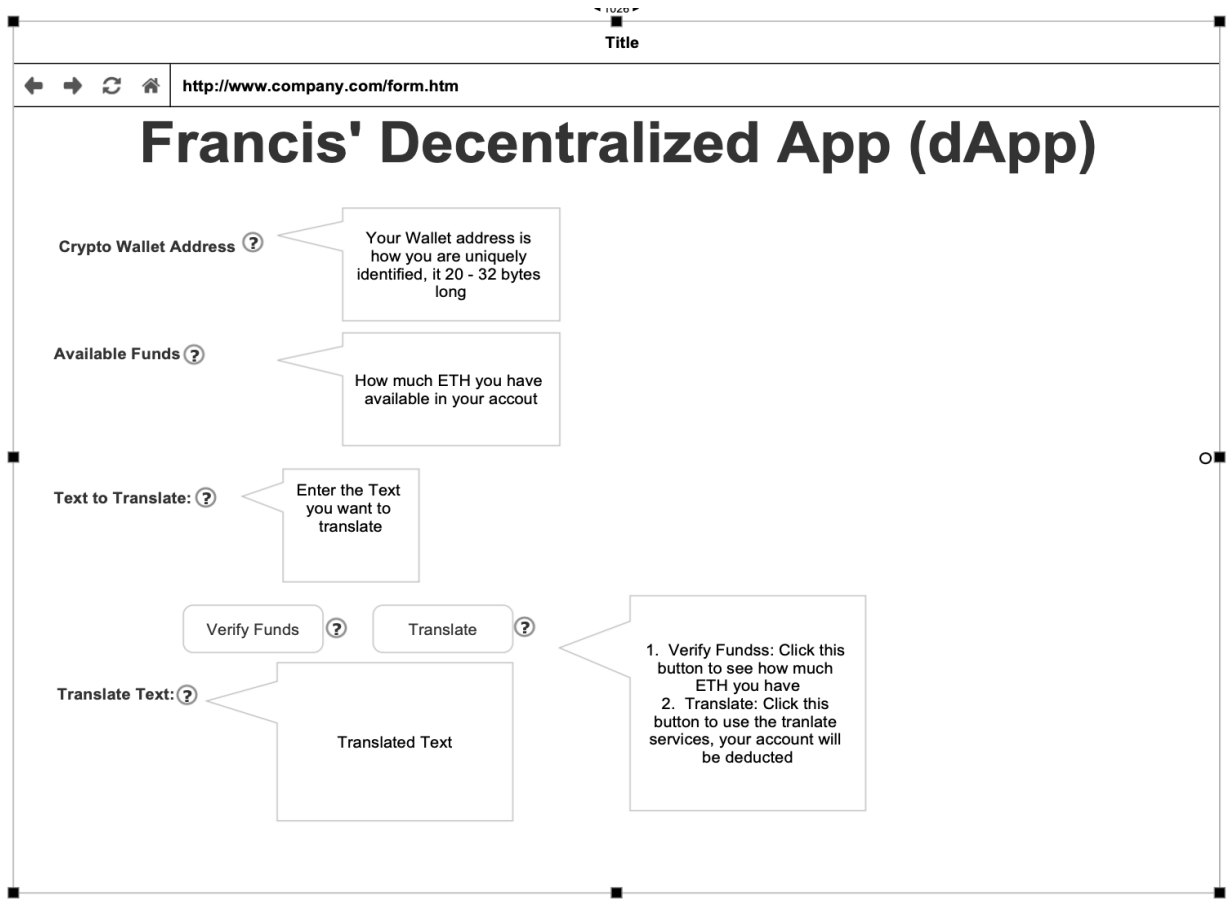
Draft 3 Base Page:



Changes:

- Added Section explaining the reasons on why a user might want to use Crypto
- Added 'help' icons to each form field and button that will explain what each is for
- Added Hyperlinks on the bottom right that will link to pages that provide more information on cryptocurrencies and decentralized Apps.
- Added a dropdown menu, that will allow users to select pre-generated addresses.
- Moved the 'verify funds' button next to the translate

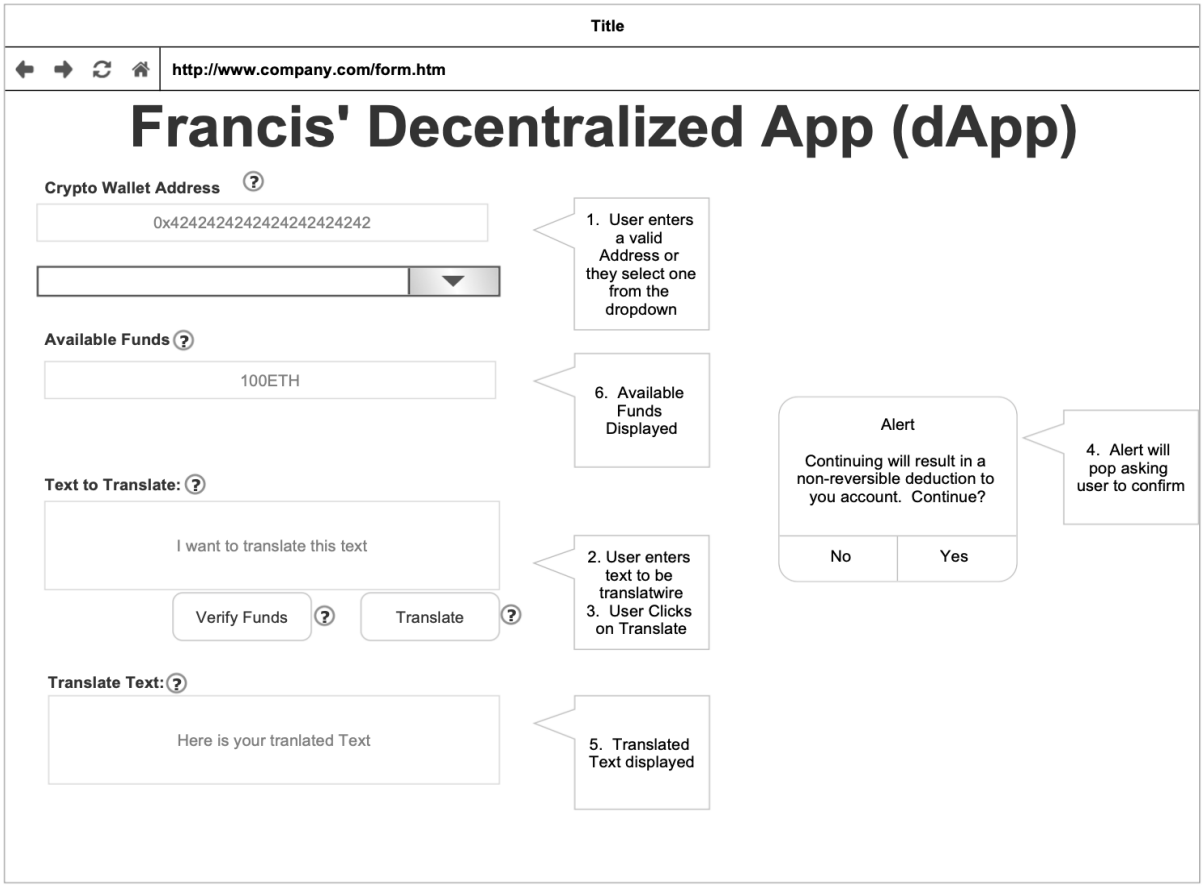
Draft 3 Help Dialogs:



Changes:

- ‘Help” information for each form field and button
- Show the dialog that will pop up when a user hover over the help icon

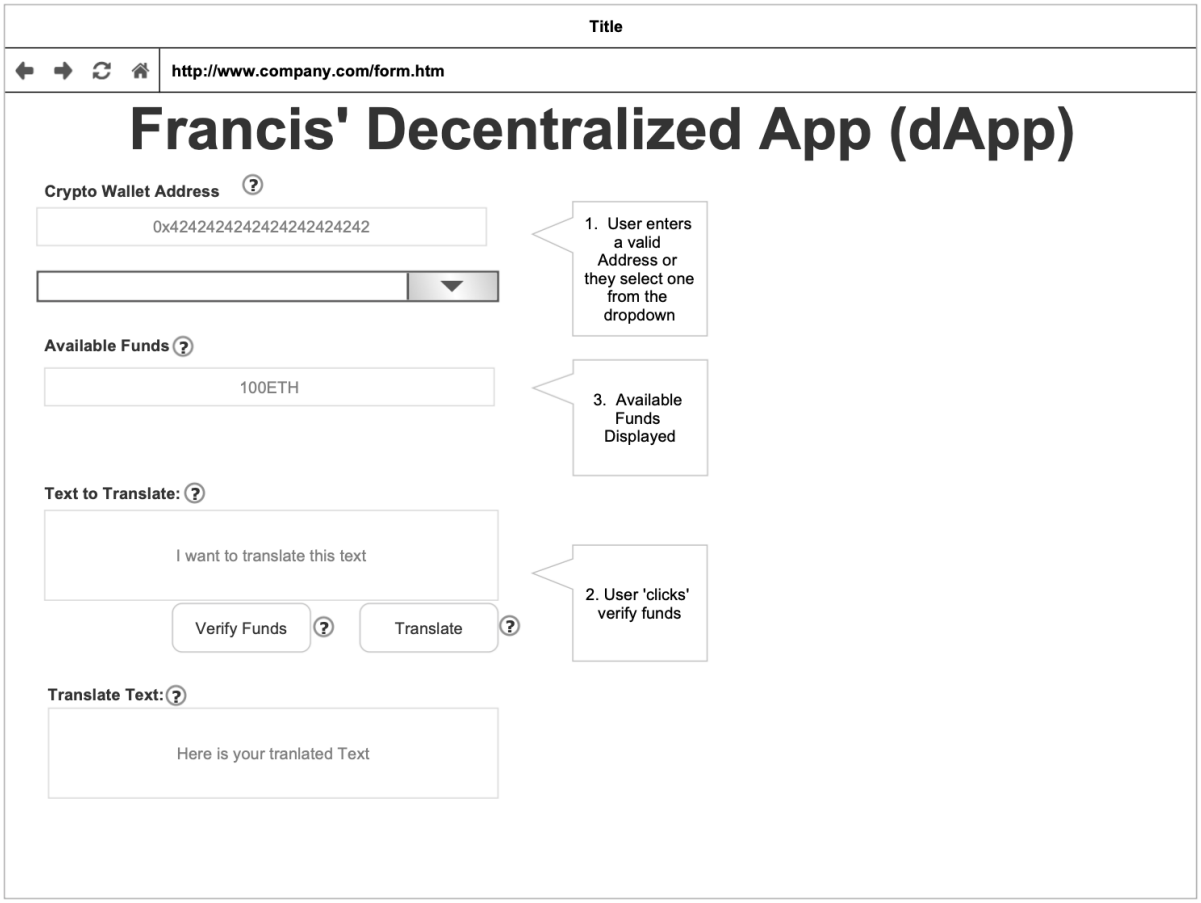
Draft 3 Translate Function:



Changes:

- Added an Alert or Warning that will pop up either as the user hovers over the translate button or after the user ‘clicks’ translate, I haven’t decided which one yet that I will implement. This will inform the user that the transaction, i.e. the deduction to the accont is non-reversible.

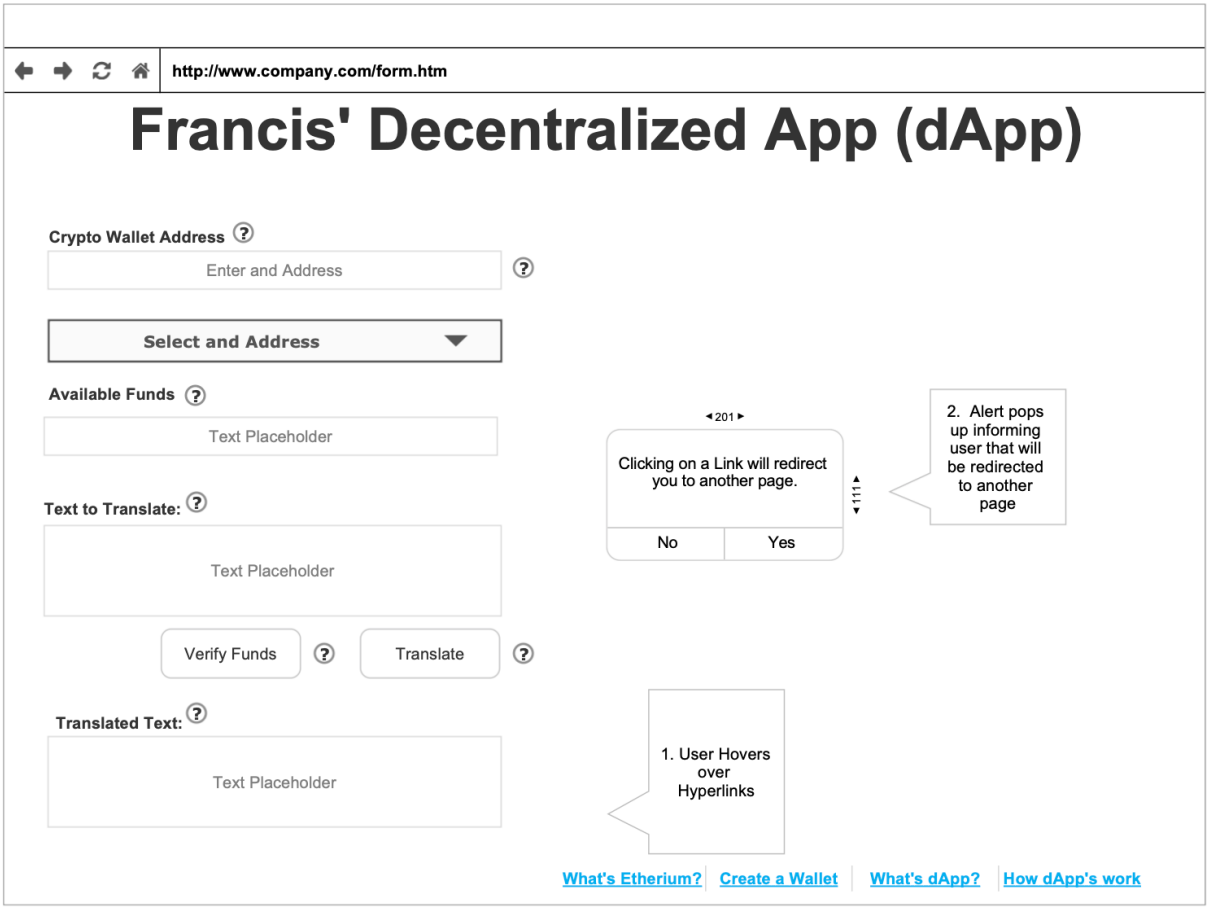
Draft 3 Verify Funds Function:



Changes:

- Addedd the dropdown menu that will allow a user to select a valid wallet address

Hovering over hyperlinks:



Changes:

- Hyperlinks feature added
- When user hover's over hyperlinks or clicks on them, it will inform them that they will be redirected.