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CS 352

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**Empirical Evaluation Preparation**

**Analytical/Empirical Test Plan**

We are designing a user interface for an app designed to run on the IPFS protocol, which uses content based addressing. It provides a framework for building applications that do not rely on traditional methods of data storage and retrieval (i.e. databases, user accounts, etc). IPFS is one of many new and innovative protocols emerging as an alternative to HTTPS for storing and retrieving content throughout the web. To better showcase this technology, we are making a user friendly UI that takes the shape of a recipe website. To the user, recipes should be displayed, stored, and retrieved seamlessly and indistinguishable from other sites that use databases to store recipes. By having a proper display and UI the IPFS is proven to be working correctly.

For our empirical evaluation, we will be using Nielson’s Heuristics. Due to the limitations of Balsamiq that make it difficult to test things like *flexibility and efficiency of use*, and almost impossible to test *error prevention*, we will be focusing our evaluation on *visibility of system status, matching between the system and the real world, user control and freedom, consistency and standards, and aesthetic and minimalist design.*

It is our hope that the interactive wireframe developed in Balsamiq will be effective at allowing us to obtain user experience data in regards to our current project designs. Through this process we will be able to identify usability problems in our design that we can address moving forward.

**Usability Study**

For user testing, we first chose a vet student at OSU who likes to cook. This user frequently uses various recipe sites by googling what they would like and browsing until they find a good recipe. As a result of their random googling, the user does not use the same site every time and often finds poorly made websites. As a vet student, they have no connection or bias on how IPFS should display but rather how the recipes website should act.

Our second user is a dietetics student at OSU at the College of Public Health and Human Sciences. Their knowledge of nutrition should provide beneficial insight into the effectiveness of our UI in terms of presenting data in a meaningful and intuitive way.

**Tasks to Evaluate**

One team member will interview the user (by showing them a wireframe/hand sketches from balsamiq or paper in a Wizard of Oz style interaction. The interview will utilize audio recording and handwritten written note taking). Before the user is asked to perform a number of tasks through the website design, they will be asked a Think Aloud question as follows:

Think Aloud:

1. [Find the instructions for a given recipe]: Once on the home page, the user will be asked to search for a chicken alfredo recipe. There are many ways to get one from this point.

What we intend to find: This will give us insight into how the users will attempt to navigate the site, whether or not they understand what the home page is displaying, and get feedback on the overall design of the home page as it is where we will be starting the users out.

Why this is useful: A very important aspect of any recipe site is viewing the actual recipe data, including instructions on how to make the recipe as well as the ingredients and possibly even images of what the finished product should look like. Determining which method is used most often will help us to refine the interface and make it a much smoother user experience.

1. [Add a recipe to favorites]: The user will be given instructions to navigate to the home page. From the home page, the user will then be asked to find the recipe for Chicken Alfredo. Once found, the user will be asked to add the recipe to their favorites.

What we intend to find: We chose Chicken Alfredo because chicken is a very popular food and our home page displays popular foods by ingredient. By asking the user to find this, we can determine if this ordering is useful, or if the user would simply use the search bar instead.

Why this is useful: The ability to favorite recipes for later use both makes the site easier to use, and encourages the user to come back should they need those recipes again in the future. It is important to know if the implementation of this feature is intuitive and easy for the average user to use as it is one of the features we hope will bring users back to the page.

1. [Create a new recipe]: During the recipe adding process, the user is asked if they would like to make the recipe public or private. Instructions on the privacy of the recipe will not be given as it is important to understand which choice will be made by the average user. The user will be given information to add as a new recipe and asked to “Please add these ingredients and instructions as a new recipe”. The user will be on the view recipe page at this point and will need to go back to the home page and then add a recipe from there, but will not receive instructions on how to get to the add recipe page.

What we intend to find: This will give us insight into the effectiveness of our add a recipe page as well as site-wide navigation.

Why this is useful: Another key aspect to our project is the ability for users to create a recipe, and choose whether it is displayed publicly or remains private for only the uploading user to see. This task is important for our evaluation because the site relies on users adding recipes to have recipes for other users to look at.

1. [Find your newly added recipe]: From the view page, we will ask the user to find a list of the recipes they have added to the site. The user will be asked to leave the view recipe page, and then find it again (without using the back button).

What we intend to find: There are a few ways the user will be able to find their uploaded recipes.

Why this is useful: This is an important feature of the site as it allows the user to manage their recipes as well as easily find the recipes they added to use later. It is important for us to have a clear understanding of how people will be looking for their recipes as this is one of the main features of the site. If a user is having a hard time finding the recipes they have added to the site they will most likely not return to the site.

1. [Preview and cancel a recipe while creating]: During the recipe adding process, the user is asked to preview their recipe using the options available on the web form. They will not be instructed on how to find this option or what to expect when they click on it. We will have them go through the same process with the cancel feature.

What we intend to find: This will provide feedback in the affordance of our design by giving us an idea of how intuitive our implementation of these features are.

Why this is useful: We need to know if we need to provide more clarity for using this feature. Because a webform is inherently busy, it is critical that we eliminate any unnecessary clutter to make everything feel as clean and easy to work with as possible. While features like this may seem intuitive to us, it might not come across the same way to an end user. In terms of the cancel button, we need to make sure that it is clear to the user that cancelling will delete the work they have done and abort the add recipe process.

1. [Navigate to the display page for one of the user’s favorite recipes]: The user will be instructed to navigate to one of their favorite recipes from the homepage. The home page has a feature that will expand either the listed public recipes or favorite recipes to fill the area where recipe thumbnails are displayed.

What we intend to find: We want to determine whether this feature will work the way the user expects, or if it introduces confusion or frustration.

Why this is useful: Aesthetic designs tend to lean towards a minimalistic approach, and in some cases can oversimplify to the point of not understanding how something works. We want to know if our expanding menu design feels natural to the user, and if they will know which selection they are in at any given time.

The recorded data, in the form of written notes, audio recordings, and possibly screen captured tracking data will help us reassess our design and make sure it is functional both as a model for IPFS and a recipe website.