**Milestone: Prototype with Data**

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After carefully considering and determining the data priorities for borrowers who utilize Kiva services, a paper prototype for the main screen of the borrower’s embedded application was developed. The following is an analysis of a paper prototype for the main screen of the embedded application designed for Kiva borrowers. The analysis explains how users will access the data, why the design is suited for the user, and discusses how creativity is balanced with the code of conduct Kiva provides.

When the user launches the application on their embedded device, the application will move to a login screen if the user is not currently logged in. If the user is logged in, they will then be taken to the main screen which is depicted in the paper prototype. The application will first check for any changes in the data that is to be presented to the user and then it will continue to load the screen. The application caches data automatically for data that does not change all of the time, that way it does not have to make unnecessary requests to the Kiva API servers. It was previously determined that the data that would want to be displayed in a UI/UX wireframe includes all information related to Kiva, which the user can access by clicking the “About Kiva” button, all information relevant to the borrower and their loan(s), as well as a way for users to track their loan(s) payback progress and make requests for new loans. Making a request for a new loan can be easily done by navigating past the borrower's loan data, where they are able to click a link to request a new loan. There is also, at the top right of the screen, a “Log Out” button that can be clicked that logs the user out of the application. For the borrower user to access and modify data about themselves, such as where they live, what they do, contact information, or even make changes to their login information, they can click their account picture in the top left corner which would then take them to the screen where they are able to make such modifications to their data. This, however, does not allow them to make changes to loan data.

Next, the user is presented with an overview of all current loans and their activity. It shows relevant information to the user as it pertains to each loan, such as the load id, sector, country, a description of the loan and what it is being used for, as well as how much the loan is and how much of the loan has been funded (shown with a status bar and a percentage of how much of the loan has been funded). Directly below the funded amount status bar, is a clickable button that takes the user to a screen that shows more in-depth details about the loan that helps the user stay informed, including all information pertaining to the repayment of their loans. All of the data for each loan on the main screen is enclosed within a box so the user is able to easily identify different loans and the information as it pertains to each loan specifically. The data presented to the user on the main screen is presented in a dashboard-type view, where the user is able to scroll up and down to view various loans and their related data. Some users may have more than one loan and displaying all of this information on a small screen of an embedded device would not be possible.

The order in which the user would be expected to work through the application is to first log in. If the user does not have an account, they are able to create an account and move forward with the borrowing process. Once logged into the application, the user is presented with information regarding each of the loans they have as well as other navigational options the user can take. For a first-time user, they would likely navigate to their personal preferences to ensure they have their account set up properly and that all of their information is correct. To begin borrowing, they would navigate to the request new loan button where they would be directed to another screen to begin the borrowing process. If it is a user who already has an established account and is borrowing, it can be expected that they would look at information for each of their loans to find out if they have been funded or not. Additionally, they would be able to click the button to track their payback progress, which is also how they would make payments. At any time, the user is able to navigate to the “About Kiva” button to learn about Kiva or find out any information they need as it pertains to Kiva, their company, and their processes. Additionally, users can also easily navigate to the “Request New Loan” button to begin the process of getting a new loan. Whenever the user decides to, they can log out of the application for security purposes.

The reason I chose to include the screen elements I included was because the data needs to be presented to the user in a manner that is easy to understand and easily accessible. If the user has multiple loans, they will need to be able to easily identify which loan they are seeing data for, such as how much of the loan has been funded. Including elements such as a status bar for the amount funded, makes it easier and quicker to see the status of a loan. Similarly, bringing the data elements to the forefront of the design makes information more easily accessible and also limits the amount of navigation that needs to occur to find specific pieces of data. If a user has to navigate through a series of pages to find information, users could easily become distracted or at times forget what they initially intended to accomplish.

The reason why this layout will make sense to a user is first, it is easy to understand the functionality of the application. The application follows best practices for design layout such as button placement, size of buttons, and even color choice/usage. The layout presents information that is most relevant to the user first and adds additional functional and navigation elements next. Using a dashboard-type view for loan data presentation helps improve overall data visualization by grouping related data together that way a user does not get confused about what the data means. It also helps keep users from feeling overwhelmed by the amount of information being presented to them by displaying it to them in a meaningful and useful way. To complete tasks, users simply follow the flow of information presented to them, select the appropriate navigational element to take the user to their desired task, and again, follow the flow of presented information. When prompted, the user simply makes choices or enters data into the appropriate field to complete tasks. For example, to request a loan, the user would simply navigate to the “Request New Loan” button towards the bottom of the main screen which would then route the user to the “Request Loan” screen. They would navigate through the screen, being sure to input answers to questions in an associated text field that would store the information to be processed by Kiva. Once the request has been made, the data is sent to Kiva where it is processed, and the user is taken back to the main screen where they can choose to perform another task if they desire.

Careful consideration was taken when thinking of the design for the embedded application for borrowers. For example, in the Kiva code of conduct, Kiva (2023) has stated to not misrepresent the data from the API. Essentially, we want to ensure that the data we are obtaining from Kiva is not for any other use, such as personal use or to serve another purpose than originally intended for by Kiva. Additionally, Kiva is a nonprofit organization that has limited resources including the amount of money they can spend on resources. Kiva (2023) states that the more calls that are made to their API, the more resources you are using thus, preventing or limiting resources to other developers. Essentially, they want to make sure that developers do not request too much information or information they do not need as this utilizes more Kiva resources than is necessary for the application to do what is intended. Additionally, Kiva (2023) states that while they want you to be your own brand, it is okay to use their color schemes so that data can be associated with Kiva, however, it is important that the brand not be closely named, e.g., “Kiva Mobile”. All of these aspects were taken into consideration as the application being designed is used for borrowers to be able to gain access to lenders by requesting a loan, viewing information as it pertains to these loans, and also having the ability to see information about Kiva. It is intended to be used as Kiva would want. Also, the application is designed to make calls to the API server only as needed and will store information, when possible, locally on the embedded device. Lastly, while the application name has not yet been created, it will not be named in such a way that users would think the app was developed by Kiva themselves.

A close-up of a white board

Description automatically generated

**References**

Kiva. (2023). *Code of Conduct*. <https://www.kiva.org/build/code-of-conduct>