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Module 5 Milestone

This milestone is to discover what the data requirements for borrowers and lenders on Kiva have. The borrower persona has a flip-phone (an embedded device) and wants to stay informed, request loans, and track loan payback process and the lender persona wants to explore borrower requests, analyze their and others’ lending data, and follow borrower loan payments (in a cloud application) so that they can forecast how they will loan funds and plan the recycling of previous paid funds.

The borrowers want to request loans, stay informed of progress, and track loan payback progress. To request a loan, the borrower would need to input a few fields. They would need to input their name for LOAN\_NAME, a country for COUNTRY\_NAME, a town for TOWN\_NAME, an image for IMAGE\_ID, a description for DESCRIPTION, and the amount they are requesting for LOAN\_AMOUNT. After the loan has been requested, I think that the information that the borrower would want to access would depend on whether the loan has been funded or not. If it hasn’t been funded, they would want to see want their goal is, how much has been raised so far, and maybe how many people have funded them at this point. The names and reasons for the lenders would be nice, but unrealistic on a flip phone. If the loan has already been funded, they would want to see the total loan amount, number of monthly payments left, and the amount of the payment. The data fields in the CSV files that would apply to the first scenario would be LOAN\_AMOUNT for the total, FUNDED\_AMOUNT for the amount funded so far, and NUM\_LENDERS\_TOTAL to see the number of people that have funded so far. For the second scenario, they would want to see LOAN\_AMOUNT for the total loan amount, LENDER\_TERM and REPAYMENT\_INTERVAL to determine what the payment per time frame should be, and possibly the DISPURSE\_TIME to establish the start time for loan repayment, unless there is something else worked out for that. The interface for this type of embedded system is probably going to have to be text based. The primary users of this system are going to be the borrowers who will track their funding progress and track their repayment schedule. Another user group is support personnel who would need to use it or at least know how to use it to troubleshoot any problems for the borrowers. Working with an embedded system, the design requirements would have to prioritize simplicity, efficiency, and security in working with a text-based UI.

To make sure I have the right requirements I must review borrowers’ stories, since I am not able to interview them directly. I didn’t want to pick and choose or filter anything so I could get the best total representation, so I picked the top story on each of the first 5 pages. The first one is for Mylyn who is a 45 year old woman in the Philippines. She needs a loan for maintaining her fishing boat and buying an engine and nets. The next is for Rysbek who is a 43 year old man from Kyrgyzstan. He needs a loan to purchase dairy cows for organic milk. Next is Koudieye who is a 58 year old woman in Mali. She needs a loan to buy sheep to raise and sell at a profit. Next is Jessica who is a 37 year old woman in Peru. She needs a loan to purchase chickens to raise and to sell the eggs and chickens. Last in Juleidy who is a 24 year old woman from Ecuador. She needs a loan to grow her door-to-door clothing and beauty products business (Kiva, 2024). I think that my original data requirements would be satisfactory for all these stories, with the exception of one thing I overlooked. These people are literally from every corner of the Earth and most likely don’t speak the same language. The data interface would have to be able to communicate in their native language as well. Setting the language for the data interface could be something set up beforehand (when they create their profile) or something they can change later through the text interface.

Choosing what data to display on the tiny screen of a flip phone is not easy. It really limits the data to essential elements. If they where inputting the data for the loan, it would be more of displaying the input field than existing data, so it would have to display something for all the required inputs – LOAN\_NAME, COUNTRY\_NAME, TOWN\_NAME, IMAGE\_ID, DESCRIPTION, and LOAN\_AMOUNT. This is already pushing the limit of a display on a flip phone, but all of these fields are necessary for the initial loan application. For a screen that shows a loan that hasn’t been fully funded, I would show the amount of the requested loan – LOAN\_AMOUNT, the amount that has been funded so far – FUNDED\_AMOUNT, and the number of people that have helped fund their loan – NUM\_LENDERS\_TOTAL. I think the number of people who have funded is important because it will let you know if your description is effective or if you need to change it up to get more funders. There are a lot of other elements that I wish we could put on here, but they aren’t as important as these three things. The last screen would be for a funded loan. It would have the total loan amount – LOAN\_AMOUNT, current monthly (or whatever timeframe was established) payment – using LENDER\_TERM and LOAN\_AMOUNT, and how many payments are left, and the total amount left – using a combination of the previous fields. I figure once they have the loan, the most important information is the info for paying it off.

The lenders want to be able to explore borrower requests, analyze their and others’ lending data, and follow borrower loan payments so that they can forecast how they will loan funds and plan the recycling of previous paid funds. For exploring borrower requests, they would need the name – LOAN\_NAME, description – DESCRIPTION, amount still needed – LOAN\_AMOUNT - FUNDED\_AMOUNT, and really just about any other personal info that is available for the loans. For analyzing the lending data, they would need access to LOAN\_ID, LENDERS, the PERMANENT\_NAME or DISPLAY\_NAME for the lenders, and to be able to join between the 3 collections using the LOAN\_ID and the LENDERS fields. To follow repayment, they would need the LOAN\_ID, LOAN\_AMOUNT, LENDER\_TERM, and REPAYMENT\_INTERVAL, and since we don’t have severe limitations, we could throw in NUM\_LENDERS\_TOTAL and even join their names to it if you wanted to see who else invested in the particular loan. The interface would most likely be a web application consisting of charts and tables for visual data representation, and it would also look clean and uncluttered. The users for this portion of the system will mainly be the lenders, and they need the system to do what the lender persona wanted - explore borrower requests, analyze their and others’ lending data, and follow borrower loan payments. Another user group is administrators and support personnel who would need to use it or at least know how to use it to troubleshoot any problems for the lenders. The design requirements for the system would focus on security of all data, a user-friendly interface, and would need to be scalable, but at the same time keep cost effectiveness in mind since Kiva is a nonprofit organization and needs to have minimal overhead so the money goes to those who need it most.

Kiva. (2024). Lend. Retrieved April 7, 2024, from <https://www.kiva.org/lend/filter?sortBy=popularity>