UNI

MONEY MARKET

According to the Federal Reserve bank, nearly 40% of adults would not be able to cover an unexpected $400 expense without having to sell something or borrow money.

These are honest, hard working individuals, that lack the access to an emergency savings account.

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Goals

In life unexpected things occur: Medical emergencies, out of the ordinary utility bills, auto repairs etc. People need access to small personal loans to cover these expenses.

Conversely, there are numerous individuals searching for simple investment vehicles to earn interest on their money. These people are not sophisticated investors and are looking for a way to earn interest on cash that is better than a savings account.

These are symbiotic groups, but how can they be connected? Mobile payment services like PayPal, Venmo, Zelle & Square

"UNI changes the entire landscape of lending by allowing everyday people to become lenders and earn a profit just like banks and lending companies."

offer options for money transfers. However, they lack lending options and require you to know someone with discretionary funds available to transfer. here is not a mobile service that offers peer-to-peer lending in a simple easy to use manner that allows the lender to earn interest like a financial institution.

UNI (pronounced YOU-NEE) is the answer. UNI (An acronym for You and I) is a peer-to-peer mobile lending service. Users can lend money or borrow money quickly and easily via mobile phone. UNI is a community of people investing in each other.

Why build it?

UNI changes the entire landscape of lending by allowing everyday people to become lenders and earn a profit just like banks and lending companies. Lenders decide how much risk they are willing to assume and how much they are willing to lend (up to UNI max of $1,000).

UNI opens a entirely new universe of opportunities for both borrowers and lenders. Borrowers can now take out small personal loans privately without asking the same friends and family members they have liked borrowed from previously and possibly straining relationships.

Lenders with discretionary funds can now make a profit on their capital by becoming a lender which is a role formerly reserved for financial institutions.

The use of digital payment platforms is surging. Nearly three-quarters of digital payment users (73%) began using money transfer apps in the past five years. The growing popularity of money transfer apps coincides with a downward trend in cash use.

Unemployment and income uncertainty are putting a strain on American's ability to cover large expenses. In 2020, the number of jobs lost between February and July exceeds those lost in the great recession.

More than 20 million Americans have unsecured loans. There are millions more who do not qualify for a personal loan due to lack of credit history of poor credit worthiness.

73% of digital payment users began using money transfer apps in the past five years

Who is it for?

Borrowers:

- that need unsecured quick personal loans up to $1,000
- People with or without traditional credit history via the reporting bureaus (i.e., Equifax, TransUnion, and Experian)
- People interested in building a new credit history unrelated to the traditional reporting bureaus

Lenders

- People with extra cash, looking for an easy low risk way to earn interest on their money, by providing quick loans.

User Personas

This section provides a description of user personas. These fictional characters are used to demonstrate application user types. Identifying the different user types helps identify the users' needs, experiences and goals. In addition, personas assist the marketing team in prioritizing the product offering based on customer needs.

Name: Mary

Occupation:
Recent Graduate

Quote:
"Building good credit takes forever"

Age/Gender: 24/F

Behaviors:
- Does not have a lot of revolving credit.
- Primarily uses cash.
- Has little to no established credit.

Pain Points:
Hard to build credit, as a recent college graduate graduate. Good credit takes an extremely long time to obtain

Needs & Goals:
Looking to improve credit rating.

Name: Dave

Occupation:
CEO

Quote:
"There needs to be an easy way to invest my money and earn interest"

Age/Gender: 44/M

Behaviors:
- Always looks for additional methods to earn interest on money.
- Has multiple investments.
- Constantly builds wealth.
-

Pain Points:
Interest rates for money markets & savings accounts are extremely low. Bank fees and account balance stipulations tend to be a bit stringent.

Needs & Goals:
Generate Income by earning interest on loans.

Provide loans to others with tracking

Name: Tony

Occupation:
Waiter

Quote:
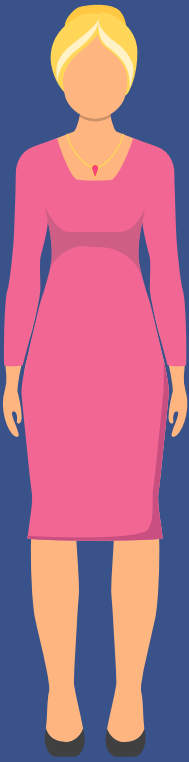*"I wish I can borrow money without feeling embarrassed."*

Age/Gender: 22/M

Behaviors:
- Always behind on bills.
- Frequently borrows money from family and friends.
-

Pain Points:
Borrowing money from family members sometimes leads to issues.

Feels anxiety about asking for money.

Needs & Goals
Pay overdue bills prior to payday.

Name: Karen

Occupation:
Doctor

Quote:
"I feel like my family never pays me back for money I lend out."

Age/Gender: 57/F

Behaviors:
- Sends money to children in college.
- Frequently lends money to family members.

Pain Points:
Does not always get paid back.

Forgets to collect on loans made to family members.

Needs & Goals:
Looking for a safe and efficient method to lend money to family and friends.

User Stories
Onboarding and User Setup

User Story #1

As a user, I want to sign up and create a profile, so that I can login to the application.

Acceptance Criteria

- Setup User Profile Stats: Name, SSN, DOB, Photo.
- Enter financial information.

- Profile Banking Information.
- Attach Credit when asdfCard Information

User Story #2

As a user, I want to login to, so that I can use the UNI application.

Acceptance Criteria

- Email or Phone number entered.
- If Phone Number: Passcode sent via text message
- Password/Passcode entry field available.
- Help Icon to provide login information.

- Email or Phone number entered.
- If Phone Number: Passcode sent via text message
- Password/Passcode entry field available.
- Help Icon to provide login information.

User Story #3

As a user, I want to link my banking information, so that I can send/receive money.

Acceptance Criteria

- Bank Account Information Entered.

- Routing Number Entered.

User Stories
Sign-in/Sign-off

Login and Logout of the UNI application. Includes multi factor authentication / authorization process.

User Story #1

As a user, I want to login to the application, so that I can use the UNI application.

Acceptance Criteria

- Email or Phone number entered.
- If Phone Number: Passcode sent via text message
- Password/Passcode entry field available.
- Help Icon to provide login information.

- Provide a sign-up CTA button that takes users to the sign-up view.
- Provide a Login CTA that takes users to the home page.
- Authentication & Authorization of login credentials.

User Story #2

As a user, I want to logout of UNI, so that I end my account session.

Acceptance Criteria

- Provide a logout CTA button to end the account session.

- Upon logout the user will be taken to the login screen.

User Stories
Loan Origination

This is the process by which a borrower applies for a new loan, and a lender processes that application. Origination generally includes all the steps from taking a loan application up to disbursal of funds.

User Story #1

As a lender, I want to make money available for a loan, so that I can earn interest on the repayment.

Acceptance Criteria

- Create unique username, password, and user profile (e.g., personal information, photo ID, SSN, banking information, UNI card, or credit card)
- Establish User Preferences:
    - Borrower star rating, UNI credit history, how long they've been a member, # of successful transactions
    - Repayment terms (i.e., duration of loan repayment)
- Minimum and maximum loan amount
- Make funds available in UNI account
- "Activate lending" to be paired with a borrower that matches criteria set in preferences
- Lender can loan from a credit card (fees apply) but repayment only made to bank account or UNI card

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User Story #2

As a borrower, I want to request a loan amount, so that I can apply for a loan.

Acceptance Criteria

- Verify the profile banking account is linked to UNI.
- Provide a dropdown list to specify the Loan Amount in the range ($50 - $1000 USD).
- Provide a CTA to move to the Loan Application Screen.

User Story #3

As a borrower, I want to apply for a loan, so that I can receive the requested loan amount in my linked bank account.

Acceptance Criteria

- Provide a calendar control to specify the loan origination date.
- Provide terms for repayment (2) or (4) weeks.   Loan maturity date is automatically set based on the repayment terms and origination date.
- Provide a checkbox to accept terms and conditions.
- Provide a CTA to initiate application. (CTA is only available after accepting terms and conditions.)
- If Approved set the loan to "Repayment" status.

User Story #4

As a borrower, I want to pay back my loan early, so that I can satisfy the terms of my loan.

Acceptance Criteria

- Check that the Bank account is linked to UNI.
- Provide a CTA to allow borrow to "Pay Now and UNI notes date/time the loan was satisfied.
- Provide a loan receipt to the borrower.
- Send notification to the lender that the loan is satisfied.
- Update borrower status to available.

User Story #5

As a lender, I want to set my default loan parameters, so that UNI can auto-assign loans to me.

Acceptance Criteria

- Check that the Bank account is linked to UNI.
- Provide a CTA to allow borrow to "Pay Now and UNI notes date/time the loan was satisfied.
- Provide a loan receipt to the borrower.
- Send notification to the lender that the loan is satisfied.
- Update borrower status to available.

User Story #6

As a user, I want to read the terms and conditions, so that I can understand the circumstances of my UNI loan.

Acceptance Criteria

- A readable and scrollable link to the conditions of the loan application are provided to the borrower.
- A Boolean checkbox stating that the borrower fully understands the terms and conditions of the loan.

User Story #7

As a borrower, I want to set my repayment dates, so that UNI can auto-assign loans to me.

Acceptance Criteria

- Check that the Bank account is linked to UNI.
- Provide a CTA to allow borrow to "Pay Now and UNI notes date/time the loan was satisfied.
- Provide a loan receipt to the borrower.
- Send notification to the lender that the loan is satisfied.
- Update borrower status to available.

User Stories
Transaction History

User Story #1

As a user, I want to check my transaction history, so that I view past transactions.

Acceptance Criteria

- CTA to view transaction history (Bottom Navigation Bar).
- Provide a scrollable list of UNI transactions (order by recency date).
- Visible information in list view control to include: LoginID of borrower or lender, Loan Amount, Transaction Type
- User Information included at top of screen to include: UserName, LoginID, Star Rating, Profile Photo.
- Each entry in list history should be a selectable CTA (to view transaction details).

User Story #2

As a user, I want to view my transaction details, so that I can view the specifics of past transactions.

Acceptance Criteria

- CTA to view transaction history (Bottom Navigation Bar).
- Provide a scrollable list of UNI transactions (order by recency date).
- Visible information in list view control to include: LoginID of borrower or lender, Loan Amount, Transaction Type.

User Stories
User Profile Management

User Story #1

As a user, I want to update my profile, so that I can modify user profile attributes.

Acceptance Criteria
- CTA to edit the user profile.

User Story #2

As a user, I want to update my notification preferences, so that I can receive notifications via my preferred method.
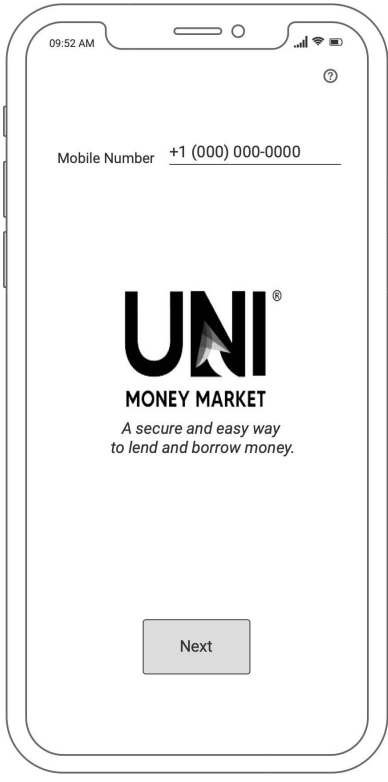
Acceptance Criteria
- Hamburger Menu option to get to Profile Screen.
- CTA to toggle push notifications
- CTA to toggle Email notifications
- CTA to toggle MMS notifications
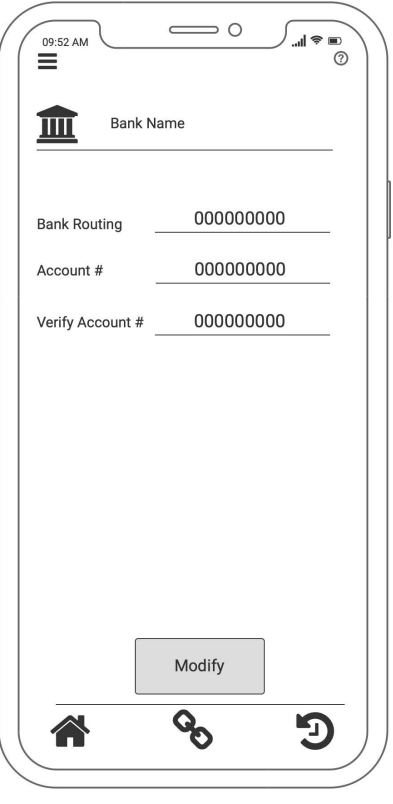- CTA button to update Profile settings.
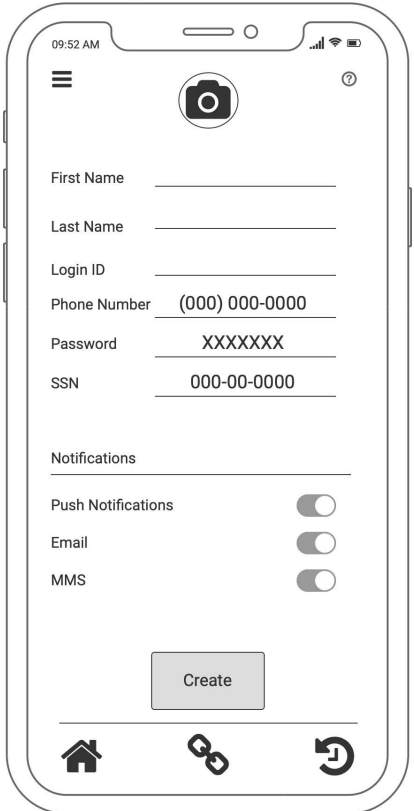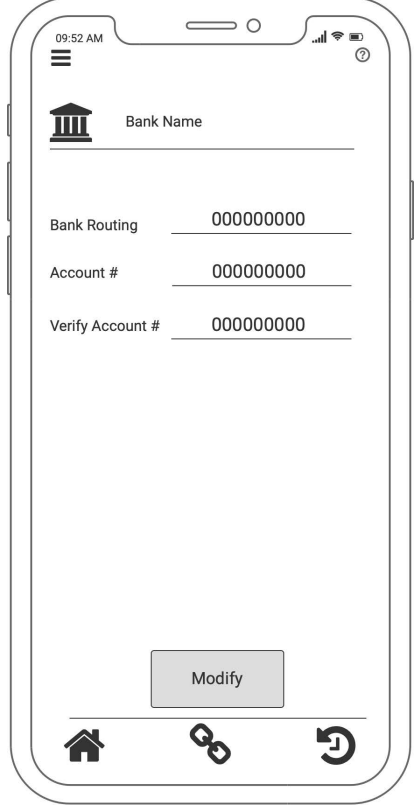
User Interaction & Design
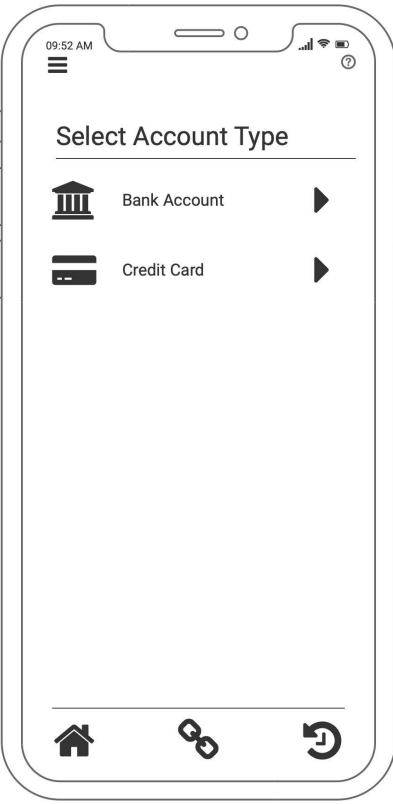
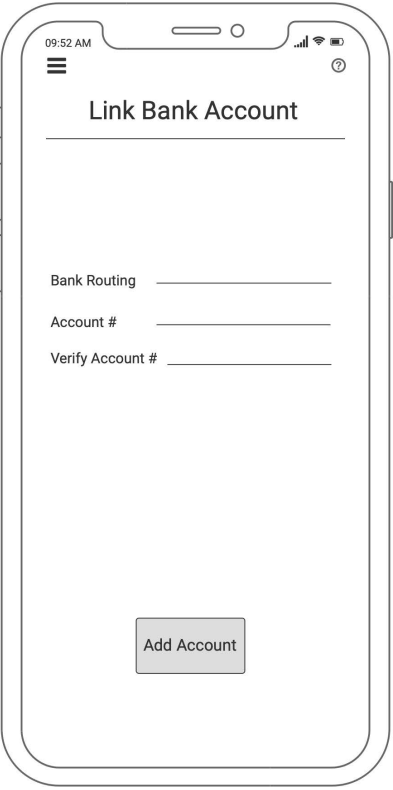The table below provides detail on the UI elements and interface design patterns used in the product.
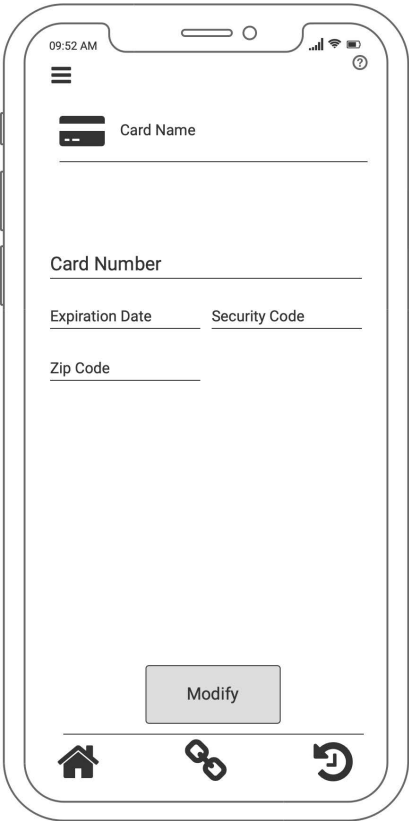
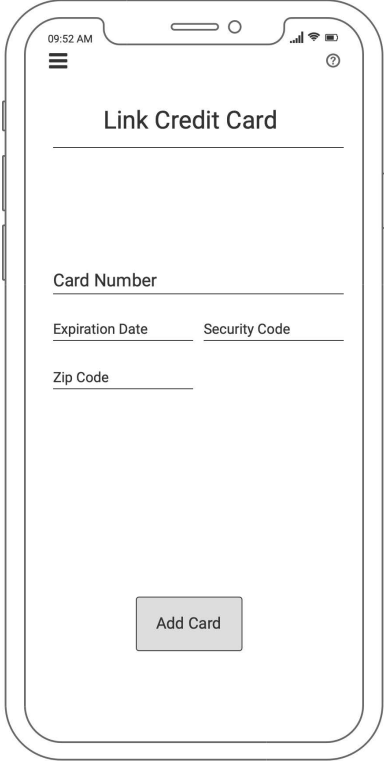| #	Screen Name	UI Elements	Mockup
1	Default/ Home	**Screen Description** This view is the default screen displayed for users logged into the application. **Images** • Profile Photo Silhouette • UNI Product logo image (appear in the center of the screen) **Labels** • Full Name • User Login ID • Star Rating • Product Tagline (to appear under the UNI product logo image) **Text Fields** N/A **CTA** • **Borrow Button** 　Action will send the user to the Borrow Screen • **Lend Button** 　Action will send the user to the Lender Screen.	

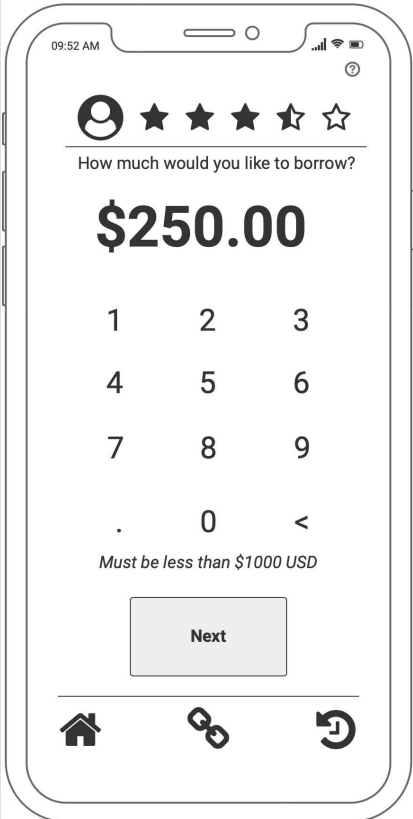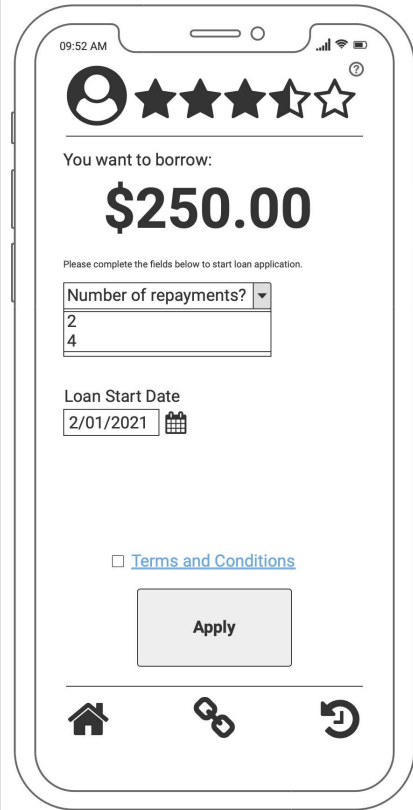| 2	User Login	**Screen Description** • This view is the default screen displayed for users NOT logged into the application. **Images** • UNI Product logo image (appear in the center of the screen) **Labels** • Product Tagline (to appear under the UNI product logo image) **Text Fields** • Email or Phone Number • Password **CTA** • **Login Button** Action will send the user to the Home User Screen • **Sign Up Button** Action will send the user to the Create User Profile Screen.	

3	**Phone Number Entry**	**Screen Description**
		• This screen is displayed when users selects Sign Up
		
		Images
		• UNI Product logo image (appear in the center of the screen)
		
		Labels
		• Product Tagline (to appear under the UNI product logo image)
		
		Text Fields
		• Mobile Number
		
		CTA
		    Next Button
		• Action will send the user to the Mobile Code Confirmation Screen
		
		    Help Button
		• Action will provide a callout with screen instructions. (To appear on the top right.)
		•	

| 4 | Create User Profile | **Screen Description**
• The Profile Screen for the UNI app should follow a User Profile Layout design pattern. This view is presented when a user is initially creating a user account.

Images
• Profile User silhouette image (appear at the top center of screen)

Text Fields
• First Name
• Last Name
• Login ID
• Phone Number
• Social Security Number
• Email Address

CTA
• Create/Update Button is at the bottom of the screen. Action creates a UNI account and persists all of the settings set on the profile screen
• Push Notification Toggle is an on/off button that allows users to toggle Push Notifications.
• Email Toggle is an on/off button that allows users to toggle Email Notifications.
• MMS Toggle is an on/off button that allows users to toggle Push Notifications. |
09:52 AM
First Name _____
Last Name _____
Login ID _____
Phone Number (000) 000-0000
Password XXXXXXX
SSN 000-00-0000

Notifications
Push Notifications ⬤
Email ⬤
MMS ⬤

Create |
| 5 | Linked Accounts | **Screen Description**
• The Linked Account Screen for the UNI app should display a list of all of the accounts linked to the current profile. This view is presented when a user selects the link CTA on the app navigation screen.

Images
• Card or Bank to indicate account type.

Text Fields
N/A

Labels
• Title "Linked Accounts" (located on top of screen)
• Bank Name
• Account Number

CTA
Add Bank or Card Button is at the bottom of the screen Action to select account type screen.

Right caret Button is located to the right of each related account. Action should take the user to the account details. |
09:52 AM
Bank Name

Bank Routing 000000000
Account # 000000000
Verify Account # 000000000

Modify |

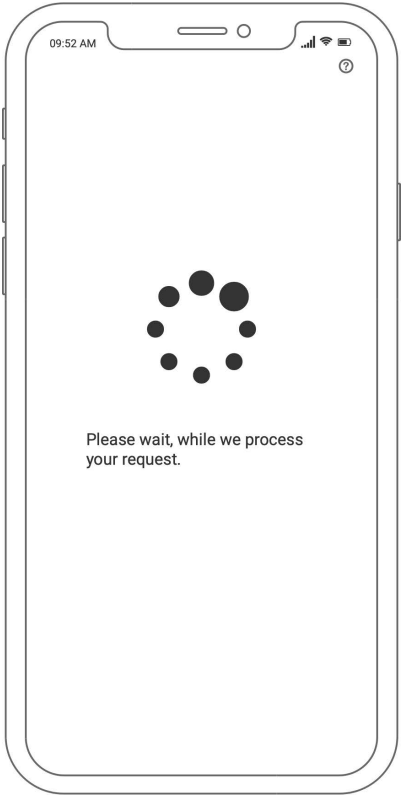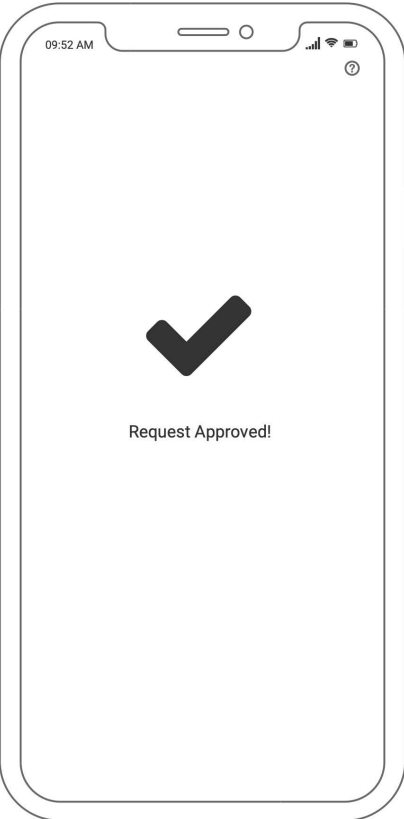| 6	Select Account Type	**Screen Description** • The Select Account Type Screen for the UNI app should display two account Types (Bank Account & Credit Card). This view is presented when a user selects the Add Bank or Card CTA on the linked accounts screen. **Images** • Card or Bank to indicate account type. **Text Fields** N/A **Labels** • Bank Account • Credit Card **CTA** • **Bank Account Right Caret Button is at the right of the Label.** Action should take users to the Add Bank Account Screen. • **Credit Card Right Caret Button is at the right of the Label.** Action should take users to the Add Credit Card Screen.	
7	Bank Account Details	**Screen Description** • The Bank Account Details Screen for the UNI app should display details of any linked bank account of credit card. This view is presented when a user selects the link right caret CTA on the linked accounts screen. **Images** • Card or Bank to indicate account type. (Located at the top left hand part of the screen. • Horizontal Rule Separates the top section from the rest of the screen. **Text Fields** • Bank Routing Number • Bank Account Number • Verify Bank Account Number **Labels** • Bank Account Name (Located at the top of the screen above the Horizontal Rule **CTA** • Modify Button is at the bottom of the screen. Action should update the account details with any changes.	

| 8 | Add Bank Account | **Screen Description**
• The Add Bank Account Screen for the UNI app should display fields necessary to link a bank account with a UNI profile. This view is presented when a user selects the Bank account account type CTA on the Select Account Type Screen.

Images
• Bank Icon to indicate account type. (Located at the top left hand part of the screen.
• Horizontal Rule Separates the top section from the rest of the screen.

Text Fields
• Bank Routing Number
• Bank Account Number
• Verify Bank Account Number

Labels
• Bank Account Name (Located at the top of the screen above the Horizontal Rule

CTA
• Add Button is at the bottom of the screen. Action should Add & Link the Bank Account to the profile. | 09:52 AM
Link Bank Account

Bank Routing _____
Account # _____
Verify Account # _____

Add Account |
| 9 | Credit Card Details | **Screen Description**
• The Credit Card Details Screen for the UNI app should display details of any linked credit card. This view is presented when a user selects the link right caret CTA on the linked accounts screen for a credit card.

Images
• Credit Card to indicate account type. (Located at the top left hand part of the screen.
• Horizontal Rule Separates the top section from the rest of the screen.

Labels
• Card Name (Located at the top of screen)

Text Fields
• Credit Card Number
• Expiration Date
• Security Code
• Zip Code

CTA
• Modify Button is at the bottom of the screen. Action should update the account details with any changes. | 09:52 AM
Card Name

Card Number

Expiration Date   Security Code

Zip Code
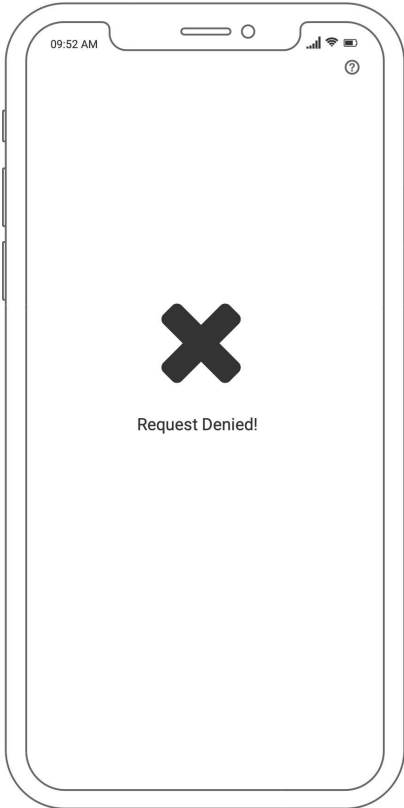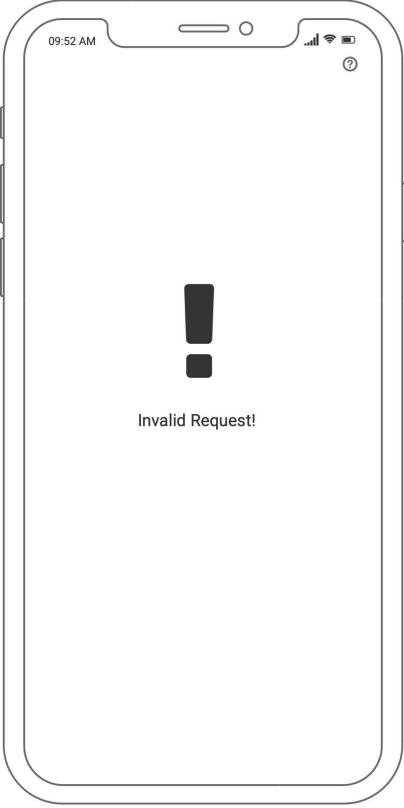
Modify |

| 10 | Add Credit Card | **Screen Description**
· The Add Credit Card Screen for the UNI app should display fields necessary to link a credit card with the UNI profile. This view is presented when a user selects the Credit Card account account type CTA on the Select Account Type Screen.

Images
· Bank Icon to indicate account type. (Located at the top left hand part of the screen.
· Horizontal Rule Separates the top section from the rest of the screen.

Text Fields
· Credit Card Number
· Expiration Date
· Security Code
· Zip Code

Labels
· Bank Account Name (Located at the top of the screen above the Horizontal Rule

CTA
· Add Card Button is at the bottom of the screen. Action should Add & Link the Credit Card to the profile. | 09:52 AM

Link Credit Card

Card Number

Expiration Date   Security Code

Zip Code

Add Card |

| 11 | Request Loan Amount | **Screen Description**
• This view is the Request Loan Amount screen displayed when borrowers are applying for a loan.

Images
• Profile logo image (appear at the top left of screen)
• 5 Star rating images (appear at the top of screen)

Horizontal Rule
• Horizontal line divide (Appears below profile image and 5 star rating)

Labels
• User Message "How much would you like to borrow?" (to appear below the profile image and star rating images)
• Usage Message "Must be between [$50 - $1000] USD" (to appear below the numeric keypad)

Numerical Keypad
• 0-9 buttons
• Delete key
• Period key

CTA
• **Next Button**
  1. Action will send the user to the Borrow Screen.
• **Help Button**
  2. Action will provide a callout with screen instructions.   (To appear on the top right.) |
09:52 AM
How much would you like to borrow?
$250.00
1   2   3
4   5   6
7   8   9
.   0   <
Must be less than $1000 USD
Next |
| 12 | Initiate Loan | **Screen Description**
• The Initiate Loan Screen for the UNI app is presented when a user selects the Next button on the Request Loan Amount Entry Screen.

Images
• User Profile Image will appear (Top left hand corner of screen)
• Star Rating Icons to appear (To the right of User profile image)
• Horizontal Rule Separates user information from the rest of the screen.

Text Fields
• Drop down box allows users to select the terms of the loan repayment.
• Calendar control allows users to select the loan origination date.

CheckBoxes
• Indidates the borrower has read and understood the terms and conditions of the loan.

CTA
• Apply Button is at the bottom of the screen. Action Initiates the loan request. |
09:52 AM
You want to borrow:
$250.00
Please complete the fields below to start loan application.
Number of repayments? ▾
2
4
Loan Start Date
2/01/2021 📅
☐ Terms and Conditions
Apply |

| 13 | Transaction History | **Screen Description**
The Transaction History Screen for the UNI app should follow a is presented when a user selects the history icon in the bottom navigation bar..

Images
• Icon representing the transaction type is displayed in each list entry. (Located on the left hand side).
• Profile Icon
• Star Rating

Labels
• UserID
• Loan Amount
• Loan Type Icon
• Transaction date
• Profile Name (Located at top of screen)

CTA
• List Entries Each entry in the list view should allow the user to view transaction details. Action will take users to the Transaction Details screen. | |
| 14 | Transaction Details | **Screen Description**
The Transaction Details Screen for the UNI app is presented when a user selects an entry in the Transaction History Table.

Images
• 5 Star Rating
• Profile Image
• Horizontal Rule bars separate sections.

Label Fields
• User Name
• User Login ID
• Loan Amount
• Repayment Amount
• Status of Loan
• Lender Login ID
• Date of Loan
• Loan Term

CTA
• **Back caret Button** is at the top left part of the screen. Action should take users back to the Transaction History screen. | |

15	**Progress Indicator**	**Screen Description** The Progress Indicator Screen for the UNI app is presented whenever a user performs an action that requires backend processing. **Images** • Progress Indicator Animation **Label Fields** • Generic Message "Please wait while we process your request". **CTA** • Transitional Screen will be followed by the Request Status Screen.	Please wait, while we process your request.
16	**Request Status (Approved)**	**Screen Description** The Request Status (Approved) Screen for the UNI app is presented whenever a user performs an action that requires backend processing and requires a status for the request.. **Images** • Response Status Check Mark (Positive Result) • Response Status X (Negative Result) • Response Status ! (Warning Message Result) **Label Fields** • Generic Message Positive "Request Approved!". • Generic Message Negative "Request Not Approved" • Generic Warning Message "Invalid Request!" **CTA** N/A	Request Approved!

| 17 | Request Status (Denied) | **Screen Description**
The Request Status (Denied) Screen for the UNI app is presented whenever a user performs an action that requires backend processing and requires a status for the request..

Images
•   Response Status Check Mark (Positive Result)
•   Response Status X (Negative Result)
•   Response Status ! (Warning Message Result)

Label Fields
•   Generic Message Positive "Request Approved!".
•   Generic Message Negative "Request Denied"
•   Generic Warning Message "Invalid Request!"

CTA
•   N/A | |
| 18 | Request Status (Error) | **Screen Description**
The Request Status (Error) Screen for the UNI app is presented whenever a user performs an action that requires backend processing and requires a status for the request..

Images
•   Response Status Check Mark (Positive Result)
•   Response Status X (Negative Result)
•   Response Status ! (Warning Message Result)

Label Fields
•   Generic Message Positive "Request Approved!".
•   Generic Message Negative "Request Not Approved"
•   Generic Warning Message "Invalid Request!"

CTA
•   N/A | |

Mobile Site Map

This section provides a hierarchical view of the screens in the UNI application and their relationships.

Figure 1 Mobile Site Map
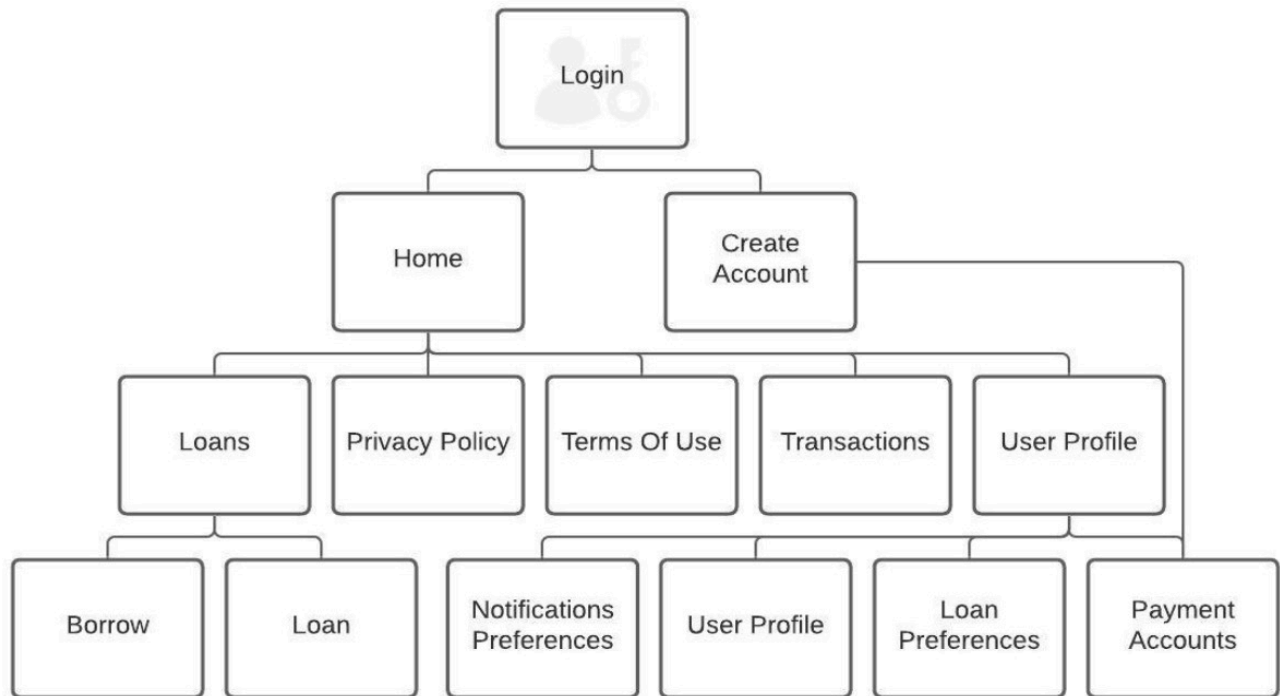
Monetization Strategy

This section details the monetization strategy that will be employed by the application.

The UNI application is a financial application and will utilize the fee schedule monetization strategy, where revenue is accrued from every financial transaction. Users will pay a fee when they use the services. Proposed charges are listed below:

Transaction Fees
1.5% fee is incurred for all transactions.
3% fee for loans made via credit card.
3% fee for immediate money transfers.

Notifications

This section briefly lists the methods of communication used by UNI and when each is invoked.

- **MMS** - Media Messaging Services is a standard way to send messages that have multimedia content over a cellular network. This method of communication will occur as a second factor of identification during onboarding and user login.
- **Email** - Electronic Mail communications will be used for several purposes: Password Verification, Account Updates and Marketing Campaigns.
- **Push Notifications** - The selectable pop-up messages that appear on your telephone are push notifications. These messages will occur when the status of a loan updates. The idea is to entice the user to re-engage with the app.

Functional Requirements

This section provides an explanation of functionality and system requirements that will be supported by the application, but is not covered by a specific screen, story or high-level goal.

- The client facing applications must track and log to the backend system the system level events, crashes, crash reports, and performance problems that occur on end user devices. These logs should be easily accessible, searchable, and reportable. Client application metrics should be visible from the system monitoring dashboard.
- The client facing applications must log user interaction analytics for screens and features to the backend system. This analytics data must be easily accessible and searchable. Administrative users should be able to use this data to understand user engagement, drive feature development, and understand user behavior.
- The backend systems must maintain a list of all transactions, disbursements, earnings, users, and any other data that may be required to adhere to federal and state regulations. Additionally, this data must be archived and retained for the retention period defined by federal and state regulations. Further, if required by law, the backend system must send year end tax statements to each user and make these documents available for download by the user. The financial reporting data must be easily accessible and exportable.
- The backend system should generate daily reports for business stakeholders for major business functions and KPI monitoring. These reports should be accessible from the administrative interface.
- System administrators will have a separate management interface to perform all required administrative tasks including but not limited to user transaction administration, user account management, adjusting business functions and parameters, systems status, and viewing reports.
- The backend system will be able to send messages to individual specific users based on the preferences set in their profile. The backend system should be able to send text, email, and push notifications.
- The backend system will be able to send messages to groups or segments of users to drive customer engagement. This functionality should be easily accessible through the administrative interface. The backend system should be able to send text, email, and push notifications.Client applications and backend systems will be built in accordance with the PCI DSS standards and best practices and the system must pass a full system security audit prior to project acceptance. The security audit will include

- but not be limited to application security, administrative interface security, backend systems security, source control security, build pipeline security, source code security, and the security of data both at rest and in transit.
- The backend systems must reliably support the agreed upon monthly active users and provide the agreed upon uptime and this must be demonstrated via load testing or any other acceptable means prior to acceptance of the project.
- The backend systems must utilize scalable event driven architecture following the best practices and guidelines set forth by the cloud provider that is chosen for this project.
- The backend systems must utilize infrastructure as code and be deployable to multiple regions and environments by means of an industry standard cloud infrastructure provisioning utility. The templates must create the entire infrastructure without any manual configurations after the infrastructure has been deployed.The vendor will provide detailed documents with the parameters used to execute each template for every environment.
- The applications and back end systems will be source controlled and provisioned to development, qa, staging, and production environments utilizing an industry standard cloud hosted deployment pipeline. The deployment pipeline will deploy system or miscroservice specific infrastructure as part of the deployment process. The build and deployment process will be hosted and provisioned according to the PCI DSS specification.
- The backend systems must have a centralized logging and monitoring environment that adheres to the best practices and guidelines provided by the cloud provider where system systems infrastructure resides. This centralized logging environment will provide administrators the ability to monitor system health via dashboards, easily and quickly search logs to diagnose issues, set up and manage alarms. Alarms and notifications for all of the systems and services should be included in the initial implementation and delivery.

High Level System Responsibilities

Below is a high level systems diagram showing the possible functional responsibilities of each system and an example authentication flow diagram showing possible system interactions. These responsibilities and interactions are greatly dependent on the features and functionality available for the programmable payment infrastructure that is chosen during the vendor election process.
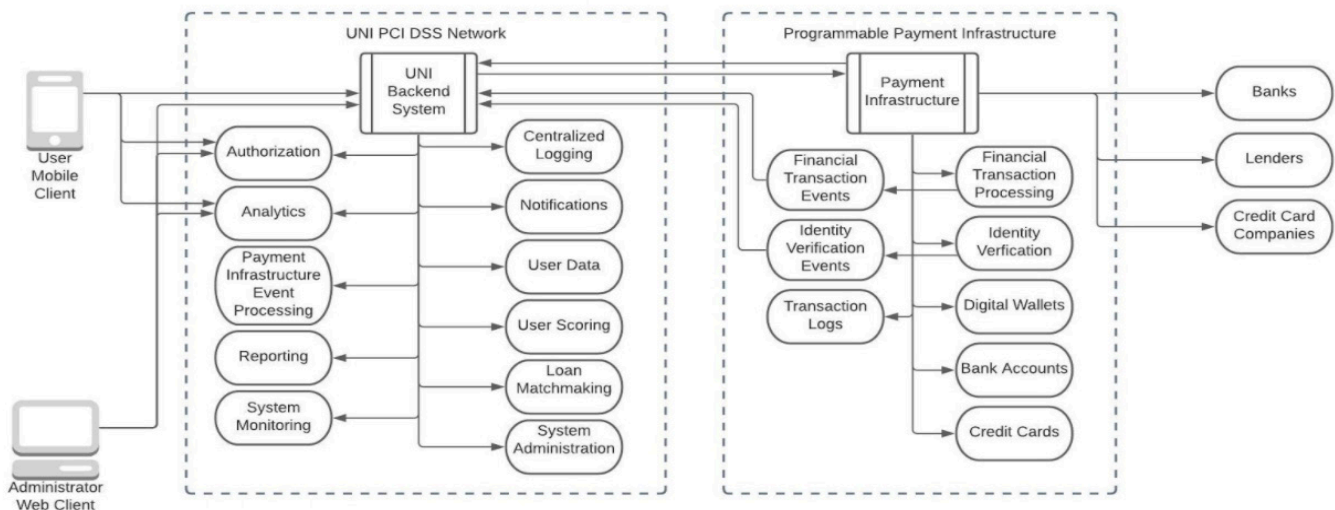

Figure 2 System Diagram

UNI Sub System Descriptions

- **Authorization** - The Authorization service is responsible for providing all backend functionality required to log in, create user accounts, managing user accounts, managing user roles, and storage of personally identifiable user data.

- **Analytics** - This sub system is responsible for storing application events related to the user's quality of experience, screen interactions, and functional interactions.

- **Reporting** - This sub system is an abstraction for a larger system that will generate all of the reports and documents needed for system administration, KPI monitoring, and government compliance.

- **System Monitoring** - This sub system is responsible for monitoring all sub systems and integrations and providing real time feedback and alarms in the event of a system failure.

- **Centralized Logging** - This sub system is responsible for being a central repository for all internal system logs.

- **Notifications** - This sub system is responsible for all user notifications including text, email, and push notifications.

- **User Data** - This subsystem is an abstraction of a larger system required to store and retrieve data for the UNI Backend System.

- **User Scoring** - This subsystem is responsible for setting user's UNI scores and updating the scores based on the criteria defined in the requirements. A UNI scoring algorithm will assign users with the following ratings: (0 stars - High Risk, 1 star - High Risk, 2 stars - Moderate Risk, 3 stars - Moderate Risk, 4 stars - Limited Risk, 5 stars - Low Risk)

- **Loan Matchmaking** - This subsystem is an abstraction of a larger system responsible for matching lenders to borrowers, executing loan transactions, scheduling repayment transactions, and storing transaction data.

- **Systems Administration** - This subsystem is responsible for the administrative interface and administrative backend functionality.

- **Payment Infrastructure Event Processing** - This subsystem will be the entry point into the UNI DSS Network from the Programmable Payment Infrastructure and would receive notifications and trigger the necessary events in the UNI backend systems. Typical events would include user account validation, payer account validation, and status updates for pending transactions.
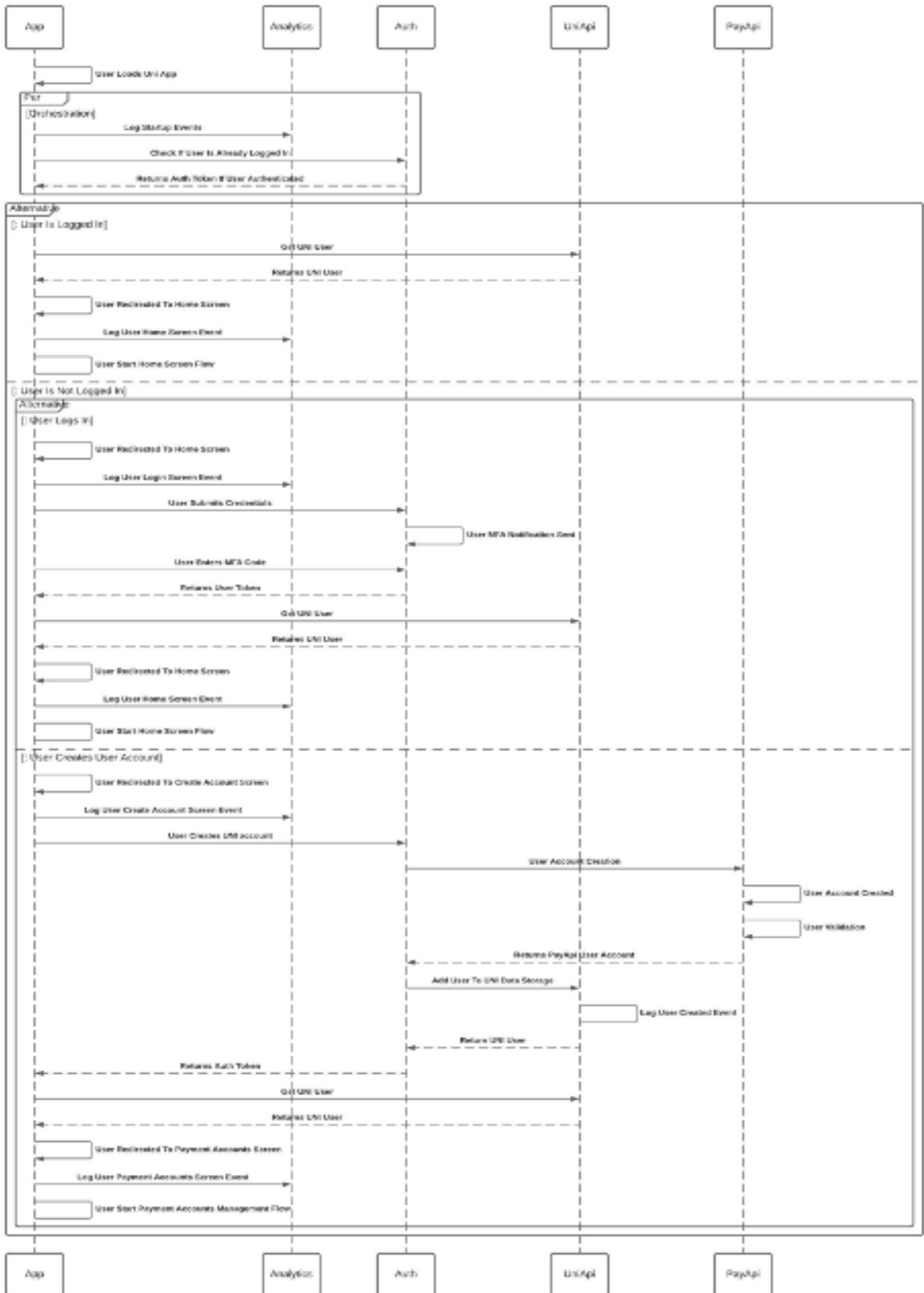
Figure 3 High Level Interaction Diagram

External Links & Files

This section provides a link to potential vendors, additional resources and frameworks. Below is a list of potential vendors and frameworks for consideration in the detailed design specification, planning, and budgeting phases of this software project.

Cloud Provider
- **Amazon Web Services** - https://aws.amazon.com/console/
- **Google Cloud** - https://cloud.google.com/
- **Microsoft Azure** - https://azure.microsoft.com/en-us/

Programmable Payment Infrastructure
- **Dwolla** - https://www.dwolla.com/
- **Dwolla API Docs** - https://docs.dwolla.com/#introduction
- **Dwolla Integration Plaid** - https://www.dwolla.com/integrations/plaid/
- **Dwolla Integration With Sift** - https://www.dwolla.com/integrations/sift/

Programmable Payment Infrastructure
- **Synapse** - https://synapsefi.com/
- **Synapse API Docs** - https://docs.synapsefi.com/docs/getting-started
- **Synapse Security Best Practices** - https://docs.synapsefi.com/docs/synapse-security

Hybrid Mobile App Frameworks
- **Ionic** - https://ionic.io
- **Ionic Framework React Native Comparison** - https://ionic.io/resources/articles/ionic-react-vs-react-native

Standardized Architecture for PCI DSS Compliance on AWS
- https://aws.amazon.com/quickstart/architecture/compliance-pci/

PCI Security Standards Council
- https://www.pcisecuritystandards.org/pci_security/

Risks, Future Iterations and Final Notes

This section provides an explanation on primary concerns and the steps that can be done to mitigate the risk. In addition, it covers potential future features beyond the Minimum Viable Product (MVP). Finally, the Final Notes is a space to capture anything that has not been properly covered within the rest of the documentation.

- A strategy needs to be put in place to recoup defaulted loans.
- A UNI scoring algorithm needs to be developed based on loan behaviors. Currently, a rating exists but no criteria is defined for assigning the rating.

Glossary

This section provides an explanation of terms and acronyms used in this document.

1. **CTA** - A Call To Action button is an interactive UI element that guides users to take certain steps.
2. **Epic** - A large body of work that can be broken down into smaller user stories.
3. **Fintech** - A financial and technology application that increases the accessibility of different finance products.
4. **Ionic** - A complete open-source SDK for hybrid mobile app development that uses HTML, CSS & JavaScript.
5. **KPI** - Key Performance Indicators are a type of performance measurement used to evaluate the success of an organization.
6. **Loan Origination** - The process by which a borrower applies for a new loan and a lender processes the application.
7. **MMS** - Media Messaging Services is a standard way to send messages that have multimedia content over a cellular network.
8. **MVP** - Minimum Viable Product is a product with just enough features to be usable by early adopters of the product.
9. **Onboarding** - The process of adopting users to an application, it reinforces the value of the application.
10. **PCI DSS** - Payment Card Industry Data Security Standard is a set of requirements intended to ensure that all companies that process, store, or transmit credit card information maintain a secure environment.
11. **UI** - User Interface describes the space where humans and computers interact.
12. **UNI** - (pronounced YOU-NEE and an acronym for You and I) is a peer-to-peer mobile lending service.
13. **User Stories** - An informal explanation of a software feature from the perspective of the user.

Assumptions

- All individuals in the United States are legally permitted to make unsecured loans. An acting lender has no limit on the loan amount or number of loans that can be made in a specified time period.

- Using the Ionic open-source SDK to build the application.

- Usury laws are regulations that set limits on the amount of interest rates, and fees in some states, that lenders can charge. These laws are mostly regulated by individual states, which means they can be drastically different depending on where you live. And, complicating things a little more, certain banks can charge you the interest rate allowed under state law where they're located rather than the maximum rate in your state — even if it's higher — thanks to a U.S. Supreme Court decision.

- Some states will set an interest-rate cap on loans and detail what conditions must be in place for usury rules to apply, including which lenders usury laws apply to (rates can vary). In Illinois, parties to written contracts may agree to an interest rate of no more than 9% per year. But in the District of Columbia, the maximum interest rate on a loan with a written agreement is 24% a year. Just keep in mind that these rates can change if the laws change, and fees, along with rates, can be regulated depending on state law.

- Uni will establish rates based on lender location and borrower's UNI credit history

Constraints

This section provides a bullet point listing of items that may be roadblocks to the development of this application.

- Decision on Mobile App Frameworks.
- Decision on Programmable Payment Infrastructure.
- Decision on Language and Frameworks.
- Decision on Cloud Provider.
- Decision on UNI scoring and rating algorithm
- Detailed System Design And Architecture
- Detailed User Interface Design

Dependencies

This section provides a bullet point listing of any known conditions or items that the product will rely on.

- Programmable Payment Infrastructure
- Cloud Provider

Project Schedule

This section provides a breakdown on this application.

Milestone	Description	Duration	Due Date
Phase I	Product Requirements Document	5 weeks	Friday February 5th, 2020
Phase II	Document Reformatting	1 week	Friday February 19th, 2020
Phase III	Vendor Selection	1 ½ - 3 months	TBD
Phase IV	Product Development	Estimated (9- 12) months	TBD

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UNI

MONEY MARKET