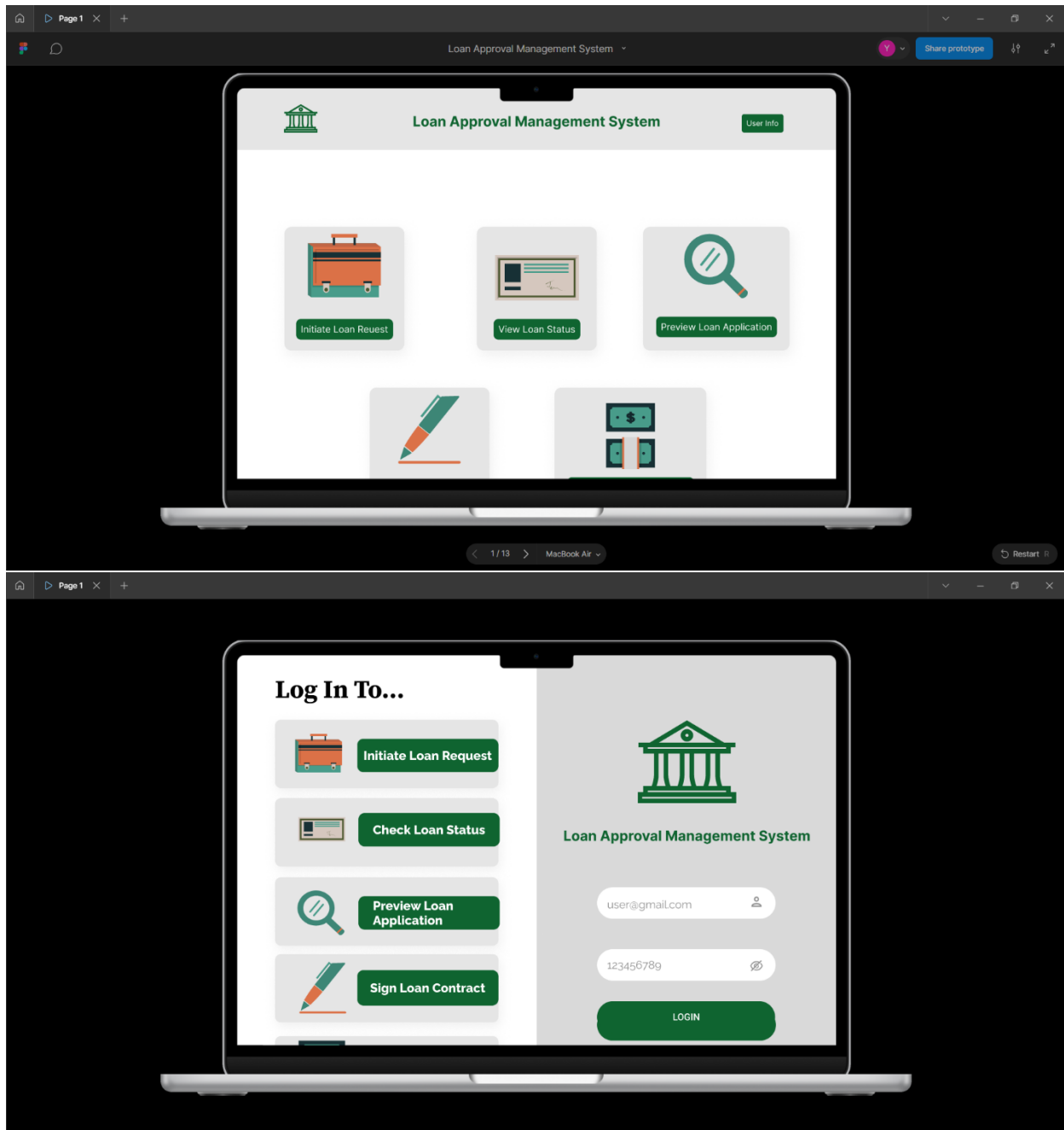
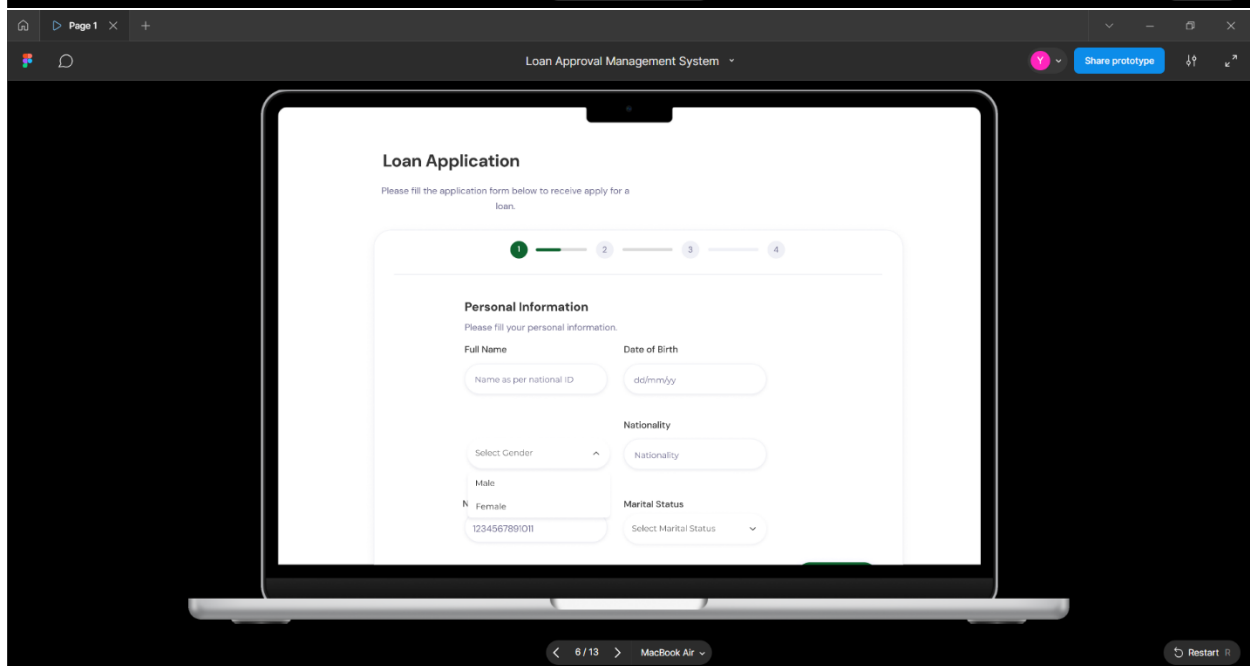
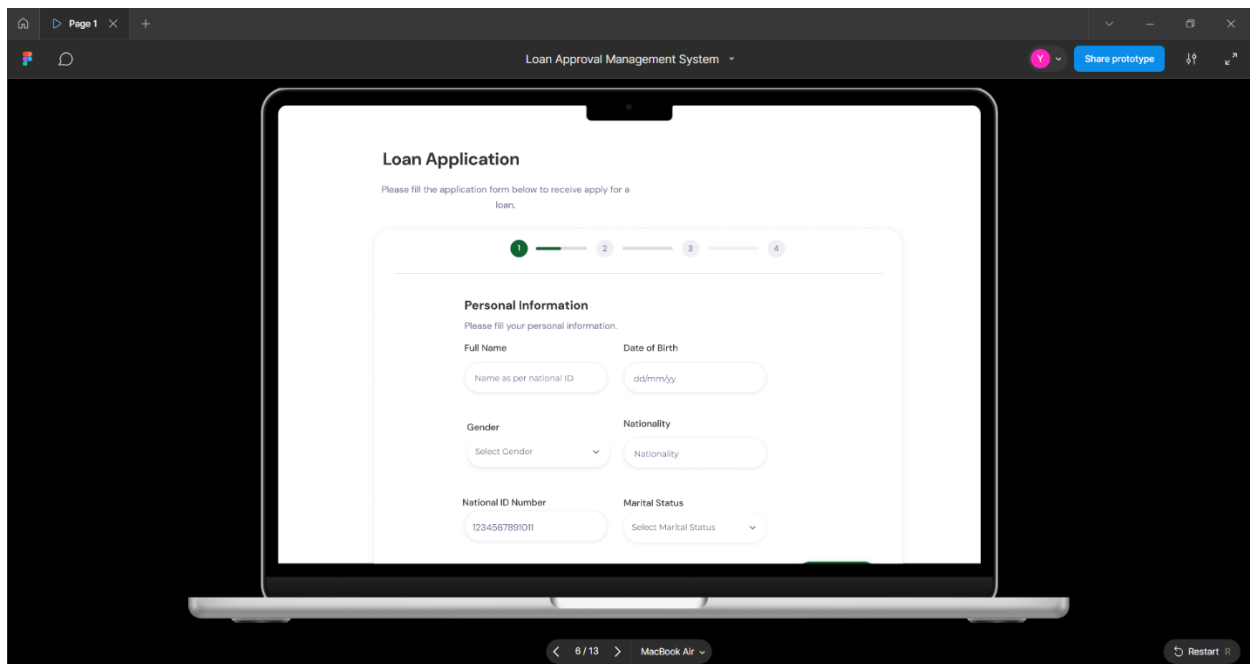


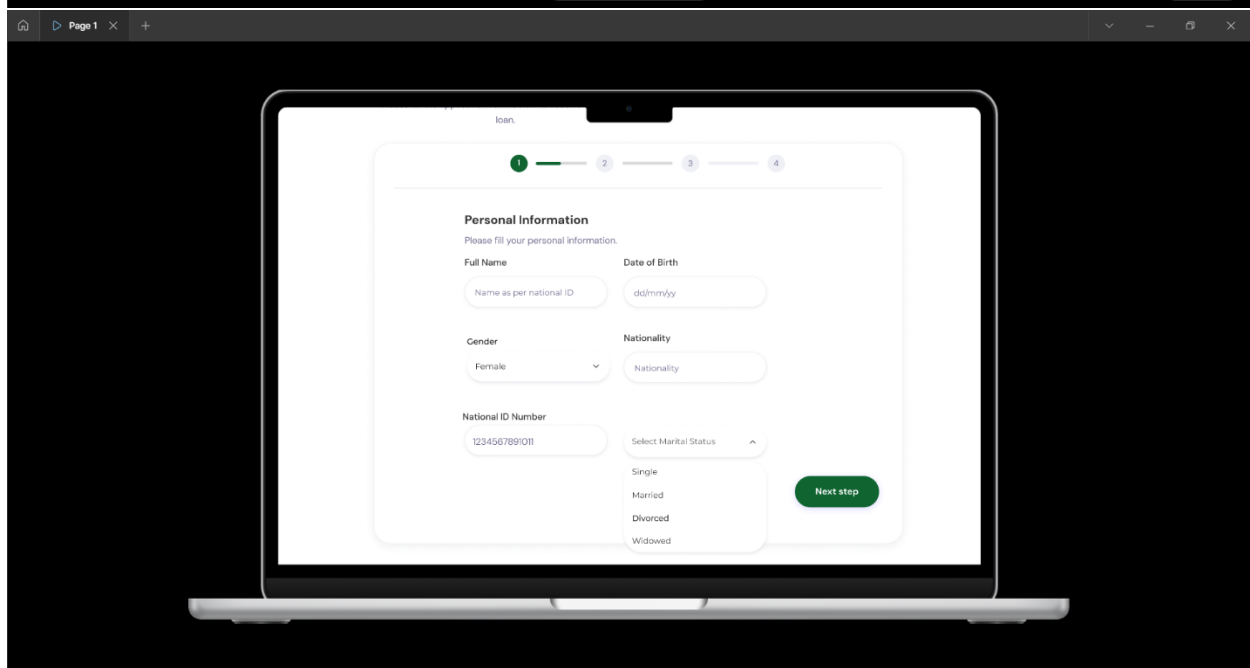
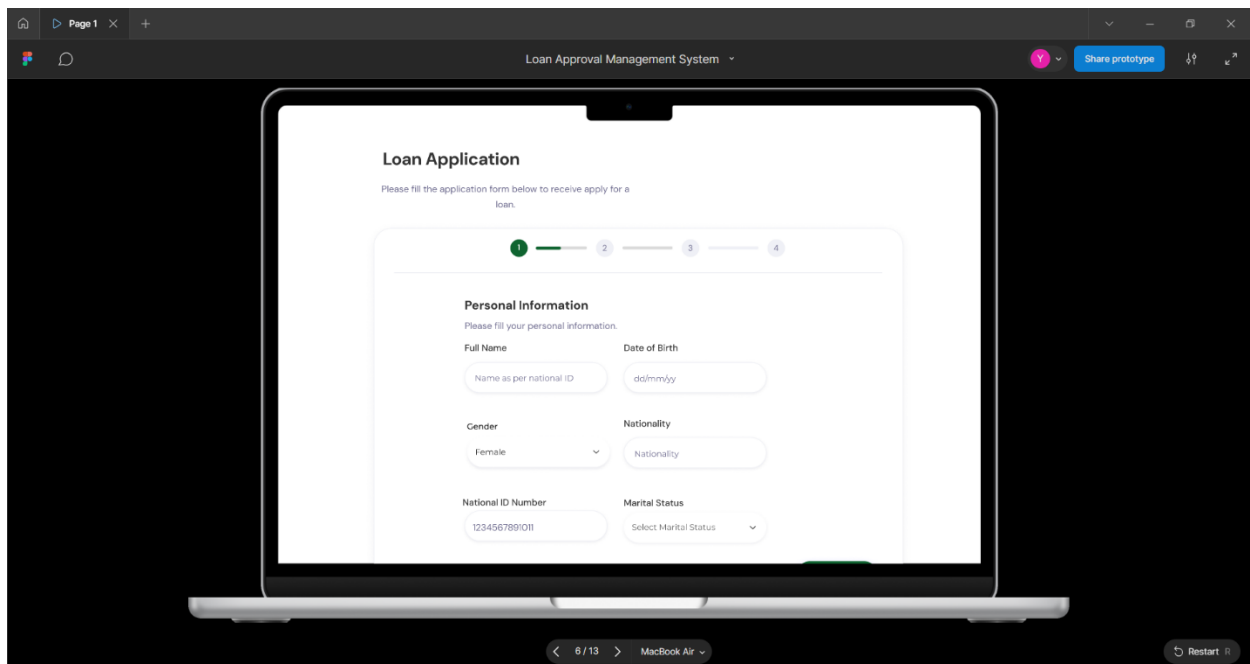
Technical Report #4

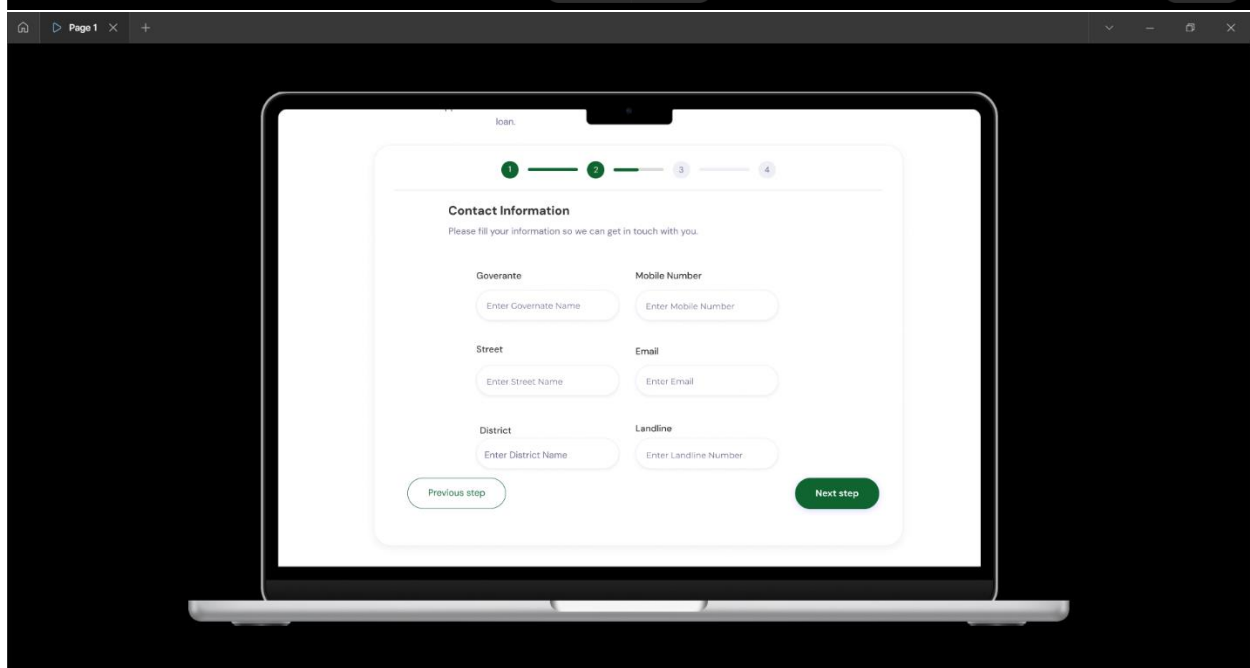
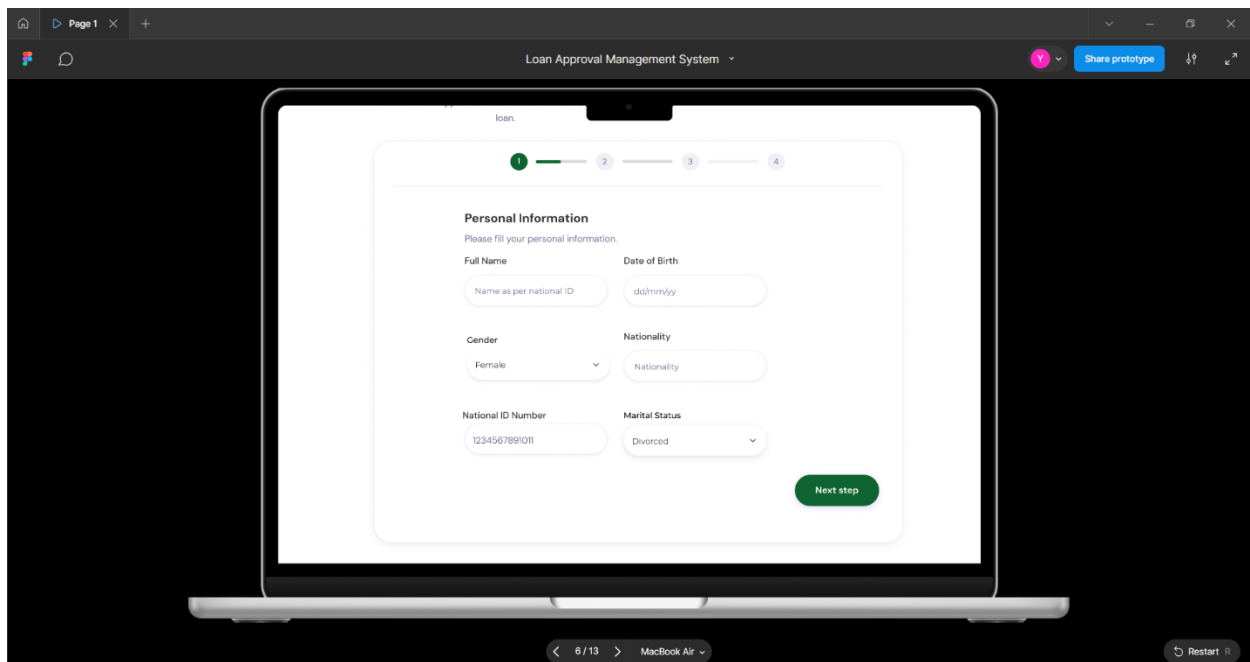
Part I

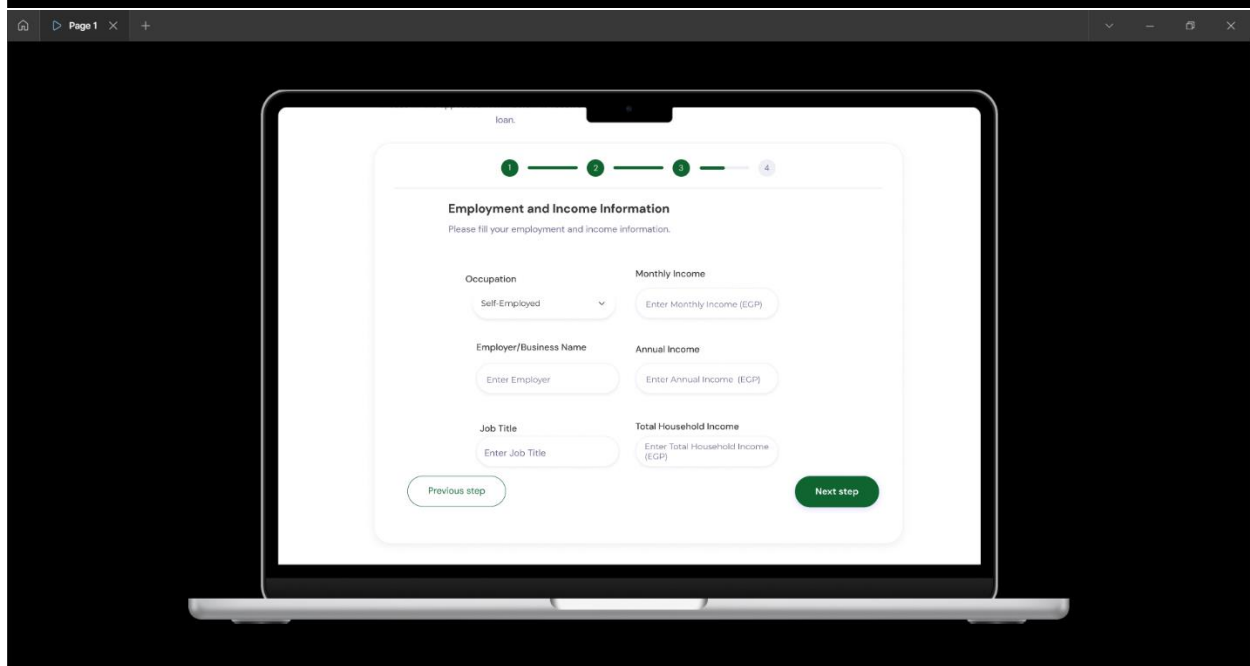
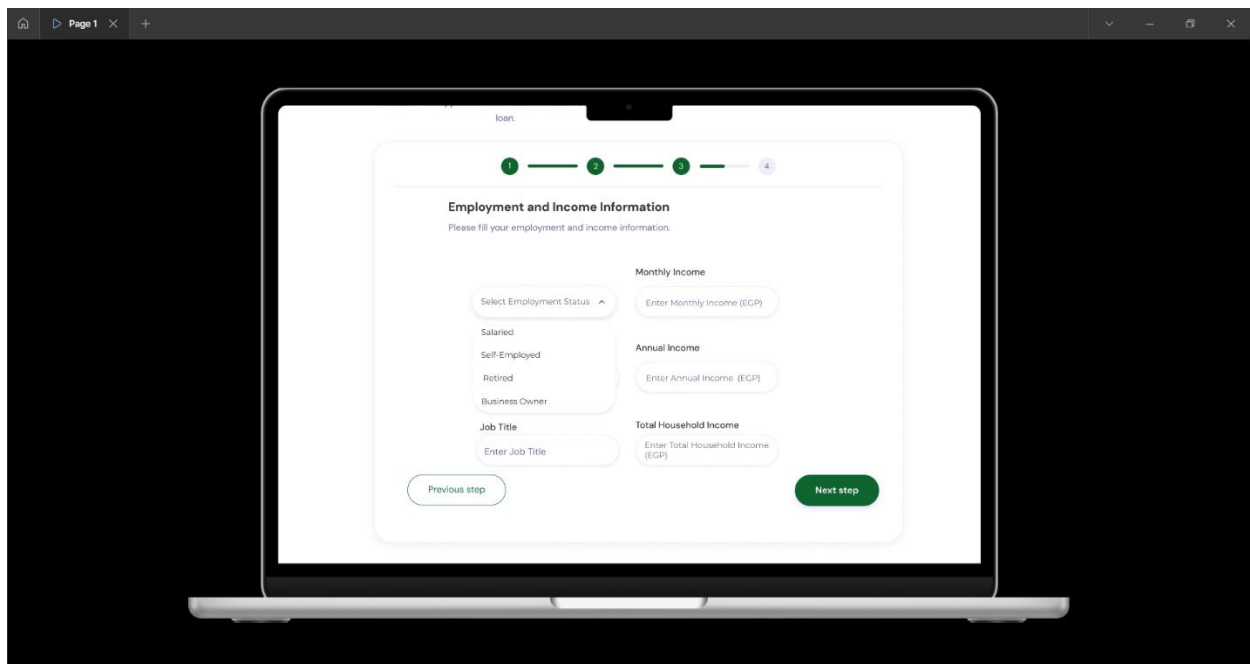
Storyboard

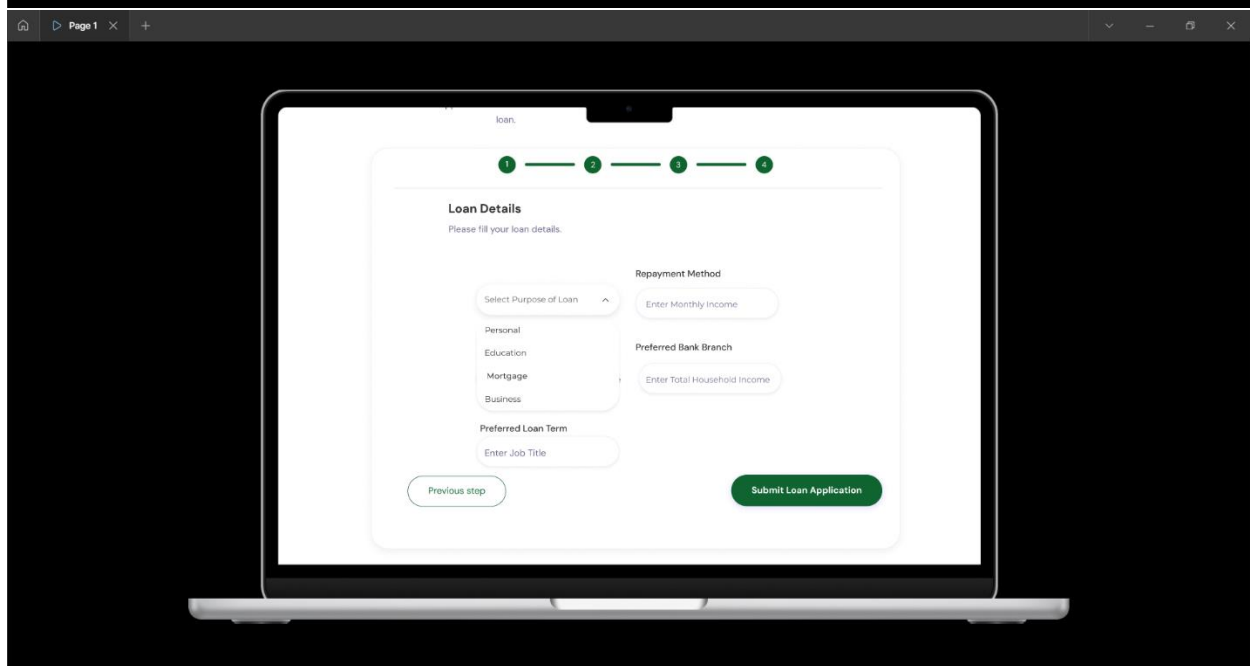
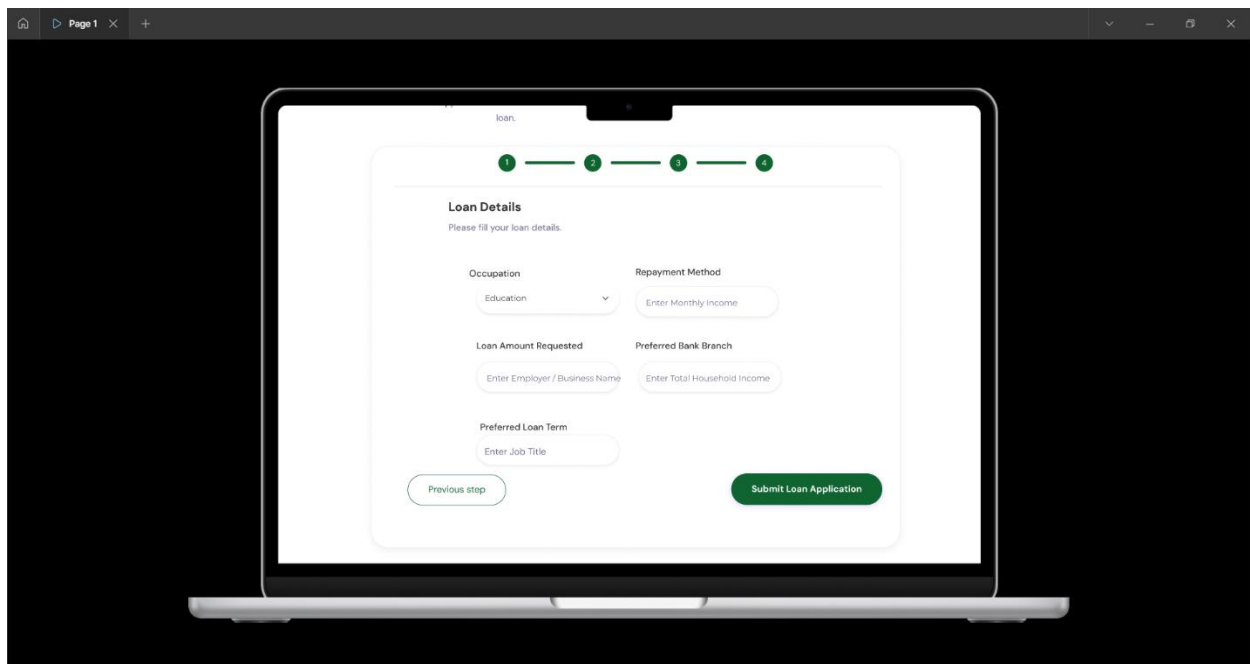


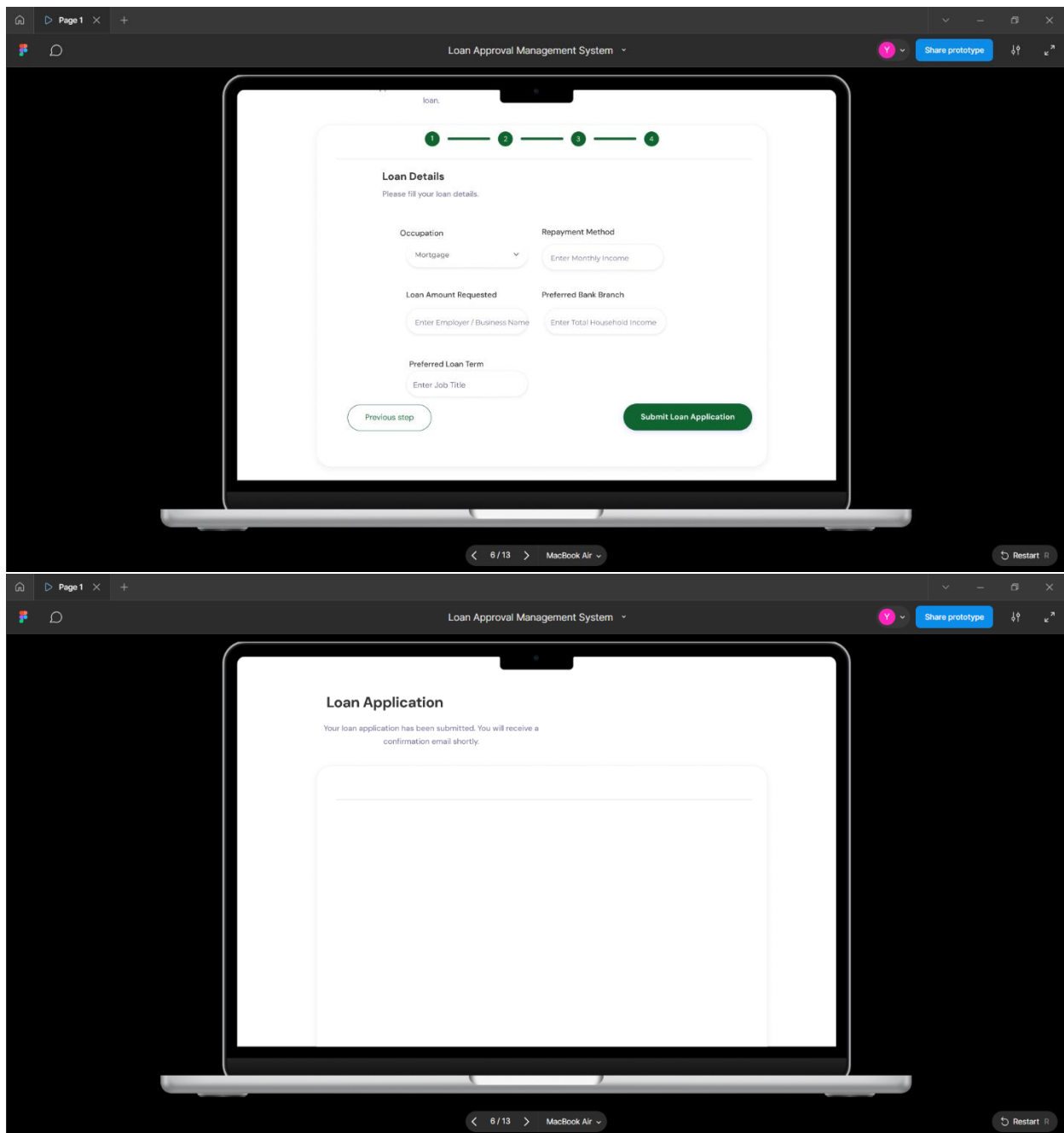










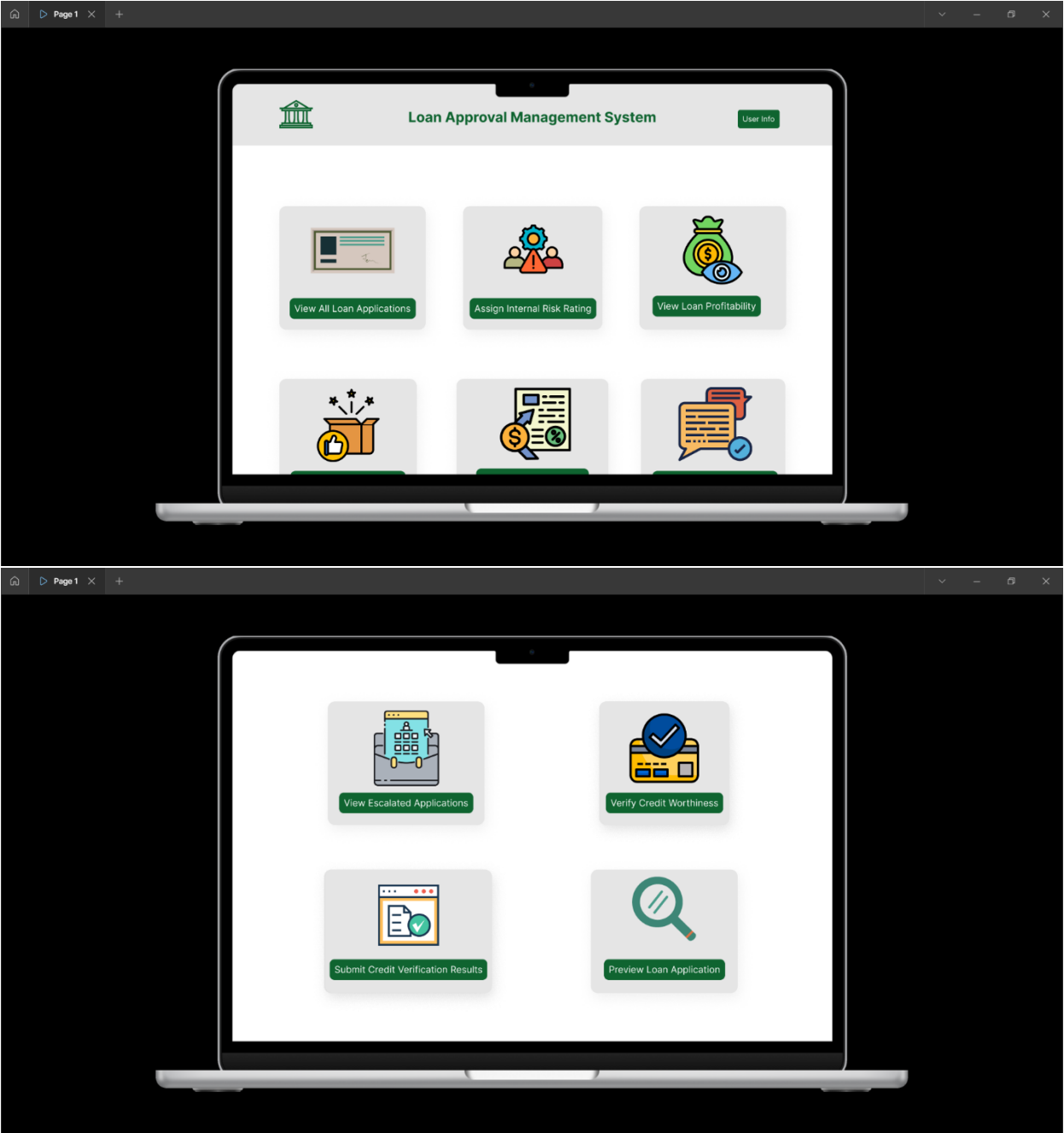


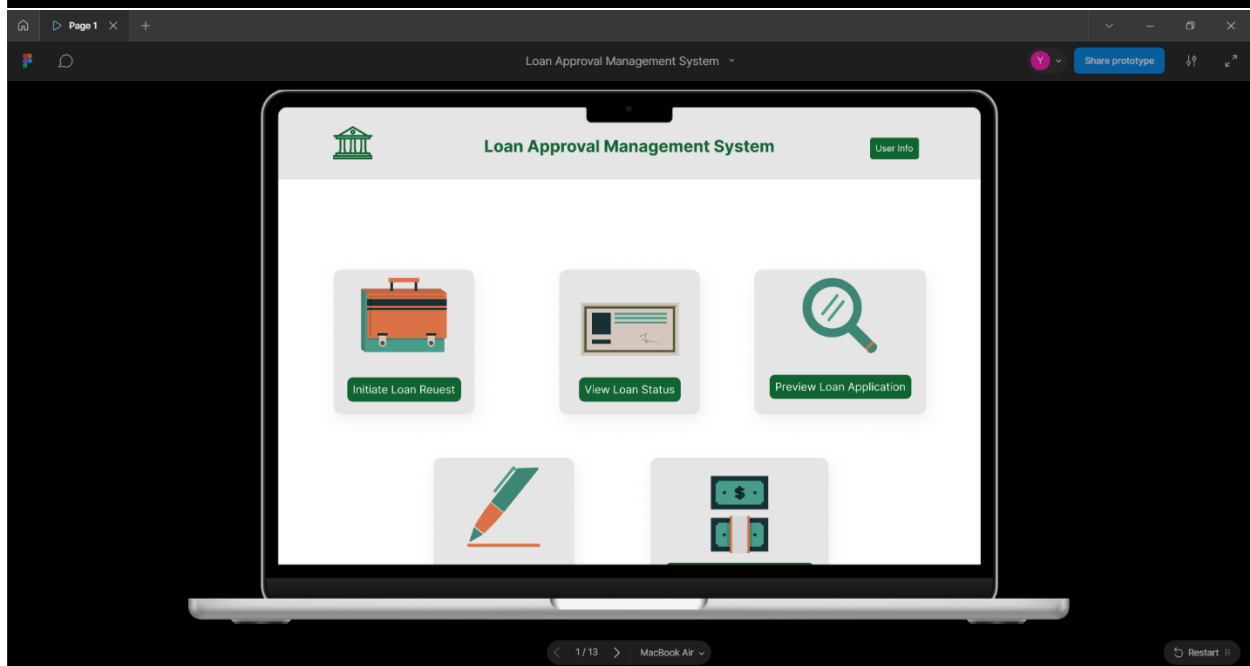
Menu Design

| Main Menu | Sub-Menu / Categories | Options / Features | Actor(s) |
|---------------|-----------------------|-----------------------|----------|
| Customer Menu | Loan Management | Initiate Loan Request | Customer |
| | | View Loan Status | |

| | | | |
|--------------------|------------------------------|--|----------------------------|
| | | Preview Loan Application | |
| | | Sign Loan Contract | |
| | | View Disbursement Notice | |
| | Account Management | Update Personal and Employment Details | |
| | | View Customer Information | |
| Credit Broker Menu | Loan Requests | View Pending Loan Requests | Credit Broker |
| | | Search Loan Applications | |
| | | Retrieve Customer Information | |
| | | Verify Customer Information | |
| | | Submit Initial Feedback | |
| | Progress Tracking | Track Loan Application Progress | |
| Clerk Menu | Assigned Loan Verifications | View Assigned Applications | Post-Processing Clerk |
| | | Verify Credit Worthiness | |
| | | Submit Credit Verification Results | |
| | Loan Previews | Preview Loan Application | |
| Supervisor Menu | Escalated Loan Verifications | View Escalated Applications | Post-Processing Supervisor |
| | | Verify Credit Worthiness | |
| | | Submit Credit Verification Results | |
| | Loan Previews | Preview Loan Application | |
| Manager Menu | Loan Evaluation | View All Loan Applications | Manager |
| | | Assign Internal Risk Rating | |
| | | Evaluate Loan Profitability | |
| | Product and Pricing | Select Bundled Products | |
| | | Determine Loan Pricing | |

| | | | |
|--|---------------|--------------------------------|--|
| | Communication | Communicate Loan Terms | |
| | Finalization | Approve and Sign Loan Contract | |
| | | Issue Loan Disbursement Notice | |
| | Loan Previews | Preview Loan Application | |

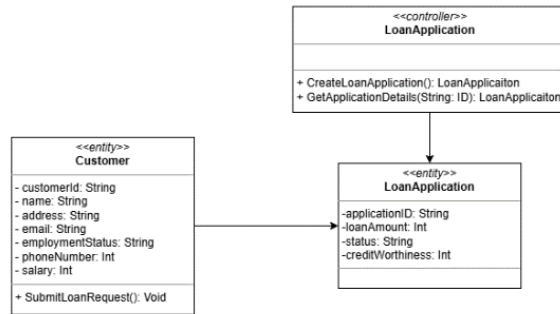




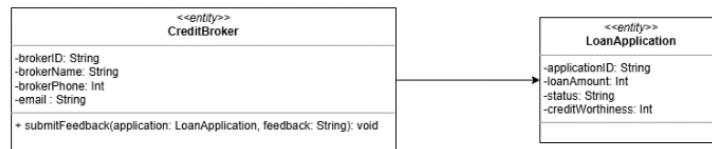
Part II

First Cut Design Class Diagram

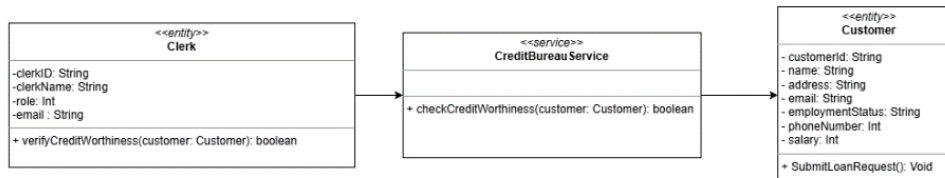
Use case: Create Loan Application



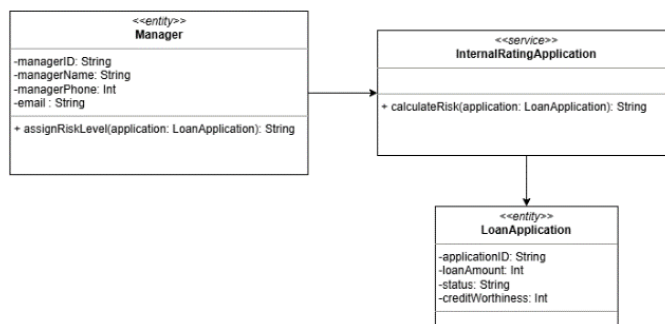
Use case: Submit Initial Feedback



Use case: Submit Initial Feedback



Use case: Assign Internal Risk Rating



Use Case 1: Verify Credit Worthiness

| Class | Responsibilities | Collaborators |
|-----------------------|--|---|
| Loan Application | <ul style="list-style-type: none">- Collects the applicant's details such as financial information, personal identification, and employment history.- Passes this information to the Credit Bureau for verification of creditworthiness. | Post Processing Clerk, Credit Bureau |
| Post Processing Clerk | <ul style="list-style-type: none">- For loan applications up to 1M euros, the Clerk is responsible for verifying the application.- Interacts with the Credit Bureau to check the applicant's creditworthiness.- Ensures that the application passes through compliance checks before approval.- Escalates cases exceeding 1M euros to the Supervisor. | Credit Bureau, Supervisor |
| Credit Bureau | <ul style="list-style-type: none">- Provides credit score, financial history, and any red flags on the applicant's record for determining eligibility.- Performs background credit checks and returns data.- Helps evaluate if the applicant qualifies for a loan based on past records. | Loan Application, Post Processing Clerk |
| Customer | <ul style="list-style-type: none">- Submits personal and financial information to start the loan process. | Loan Application |

Use Case 2: Assign Internal Risk Rating

| Class | Responsibilities | Collaborators |
|---------|---|-----------------------------|
| Manager | <ul style="list-style-type: none">- Uses the Risk Assessment Dashboard to monitor and analyze customer information like credit scores and loan amounts to determine risk.- Assigns an internal risk rating for the loan based on the customer's creditworthiness.- Ensures that all required factors are considered, like financial history and market conditions.- Submits the risk rating for further loan processing. | Internal Rating Application |

| Class | Responsibilities | Collaborators |
|-----------------------------|---|-----------------------------|
| Internal Rating Application | <ul style="list-style-type: none"> - Provides the interface for the manager to input the loan's risk score. - Pulls data from multiple systems, including credit score and loan details. - Facilitates scoring based on customizable metrics like credit history, loan amount, and interest rates. - Submits data back to the loan application once a rating is assigned. | Manager |
| Loan Application | <ul style="list-style-type: none"> - Stores the risk ratings provided by the Manager after the evaluation. - Updates loan status to reflect the assigned rating (Low, Medium, or High). - Shares necessary details (amount, loan purpose, risk) for risk evaluation. | Internal Rating Application |

Use Case 3: Evaluate Loan Profitability

| Class | Responsibilities | Collaborators |
|-----------------------------|---|---|
| Manager | <ul style="list-style-type: none"> - Analyzes data using the Profitability Analysis Dashboard to assess the loan's financial impact. - Makes decisions on how to structure the loan terms, considering bundled products for better profitability. - Reviews the Loan Approval Decision Page for profitability analysis, such as risk versus profit calculations. - Approves the final profitability structure after assessing all financial inputs. | Product Bundle, Internal Rating Application |
| Product Bundle | <ul style="list-style-type: none"> - Contains multiple products that may be bundled together to enhance loan profitability, such as insurance or extended warranties. | Manager |
| Internal Rating Application | <ul style="list-style-type: none"> - Provides an understanding of the loan's risk associated with profitability. - Assesses the relationship between risk and potential profits when bundled with other products. | Manager, Loan Application |
| Loan Application | <ul style="list-style-type: none"> - Holds details about the loan requested (amount, interest rates, terms) used to assess profitability and determine whether bundling products will make the loan more profitable for the bank. | Manager |

| Class | Responsibilities | Collaborators |
|-------|---|---------------|
| | - Provides data for calculating profitability based on current market conditions. | |

Use Case 4: Initiate Loan Request

| Class | Responsibilities | Collaborators |
|------------------|---|------------------|
| Customer | <ul style="list-style-type: none"> - Submits the loan application form with personal details such as employment, financial status, and identification information. - Uploads the necessary documents, including pay stubs, tax forms, and ID proof to support the application. - Receives a confirmation notice after the application submission. | Loan Application |
| Loan Application | <ul style="list-style-type: none"> - Receives and stores the customer's personal, financial, and employment details collected during the submission process. - Validates the completeness of the application and passes it on to the Post Processing Clerk for verification and next steps. - Creates an initial loan file to track and update throughout the process. - Confirms application receipt and provides a summary to the customer. | Customer |