Loan\_app

TECHNICAL DESIGN DOCUMENT

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# SECTION 1: INTRODUCTION

## Purpose

*Loan\_App is a free-to-use online loan calculator. Loan\_App specializes in estimating your monthly payment and how much interest will be paid through the term of the loan.*

## Terminology

|  |  |
| --- | --- |
| **Name** | **Comments** |
| *MEAN Stack* | *MongoDB, Express, Angular, and Node.js* |
| *VS Code* | *Development IDE* |
| *SoapUI* | *API testing tool* |
| *MongoDB Compass* | *Database development IDE* |
| *Angular Material* | [*https://material.angular.io/*](https://material.angular.io/) |
| *Flex-layout* | [*https://github.com/angular/flex-layout*](https://github.com/angular/flex-layout) |

## User Personas

## *1. Financial Planner*

*2. Homebuyer*

*3. Student Loan Borrower*

## User Stories

|  |  |  |  |
| --- | --- | --- | --- |
| Financial Planner | As a Financial Planner, I want to use the Loan\_App's basic loan calculation page to quickly estimate monthly payments for different loan scenarios, so that I can provide initial guidance to my clients. | As a Financial Planner, I want the Loan\_App's "About" page to provide a clear and concise description of the app's features and purpose, so that I can understand its capabilities and potential benefits. | As a Financial Planner, I want the Loan\_App's "Contact" page to display contact information or a form, so that I can easily reach out to the app developers with any questions or feedback. |
| Homebuyer | As a Homebuyer, I want to use the Loan\_App's basic loan calculation page to quickly estimate my monthly mortgage payments based on the loan amount, interest rate, and term, so that I can assess affordability. | As a Homebuyer, I want the Loan\_App's "About" page to provide a brief overview of the app's purpose and functionality, so that I can understand how it can assist me in making informed decisions about my mortgage. | As a Homebuyer, I want the Loan\_App's "Contact" page to provide a simple way to get in touch with the app developers in case I have any questions or need assistance. |
| Student Loan Borrower | As a Student Loan Borrower, I want to use the Loan\_App's basic loan calculation page to estimate my monthly student loan payments based on the loan amount, interest rate, and term, so that I can plan my budget accordingly. | As a Student Loan Borrower, I want the Loan\_App's "About" page to provide a clear explanation of how the app calculates loan payments and any other relevant information, so that I can trust the accuracy of the results. | As a Student Loan Borrower, I want the Loan\_App's "Contact" page to display clear contact information, such as an email address or a phone number, so that I can easily reach out to the app developers if I have any questions or need support regarding my student loans. |

## Time Estimations

1.1: 2 story points 3 Fibonacci sequence points

1.2: 1 story point 1 Fibonacci sequence point

1.3: 1 story point 1 Fibonacci sequence point

2.1: 2 story points 3 Fibonacci sequence point

2.2: 1 story point 1 Fibonacci sequence point

2.3: 1 story point 1 Fibonacci sequence point

3.1: 2 story points 3 Fibonacci sequence points

3.2: 1 story point 1 Fibonacci sequence point

3.3: 1 story point 1 Fibonacci sequence point

# SECTION 2: PROCESS DESIGN

## 2.1. Prototypes

*A screenshot of a computer screen

Description automatically generated*

*A screenshot of a contact us

Description automatically generated*

*A screenshot of a computer

Description automatically generated*

*A blue rectangle with black text

Description automatically generated*

## 2.2. ORD (Object Relational Diagram(s)

*A diagram of a diagram

Description automatically generateda USER can have many LOAN(S)*

## 

## 2.3. NoSQL Document Diagram

*[Covert the above ORD into a NoSQL Document Diagram]*

## 2.4. NoSQL Data Structure

*[Covert the above NoSQL Document Diagram into a NoSQL Data Structure (JSON data)]*

# SECTION 3: QA TESTING

## 3.1. QA Test Plan

*[Weekly Test Cases]*

## 3.2. Unit Tests

*[Images of SoapUI Unit Tests]*

# SECTION 4: REFERENCES

*[APA Reference List]*