

Lab 1 – *CreditTrax* Product Description

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Table of Contents

1 Introduction.....	3
2 CreditTrax Product Description	4
2.1 Key Product Features and Capabilities	4
2.2 Major Components (Hardware/Software).....	4
2.2.1 Major Functional Components	4
2.2.2 Front-End Development Hardware, Tools, and Languages	5
2.2.3 Back-End Development Hardware, Tools, and Languages	5
3 Identification of Case Study.....	5
4 Product Prototype Description.....	5
4.1 Prototype Architecture (Hardware/Software).....	5
4.2 Prototype Features and Capabilities	5
4.3 Prototype Development Challenges	5
5 Conclusion	5
6 Glossary	6
7 References.....	8

Listing of Figures

Figure 1: Major Functional Components Digram.....	4
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1 Introduction

For most people, debt is an unavoidable part of life. Most major life milestones require taking on some sort of debt – from getting your first credit card, taking out a loan to go to college, financing your first car, to having a child. While many people can navigate these obstacles safely on their own, many younger people who are just starting out on their own either lack the knowledge or the means to avoid taking on large amounts of high-interest debts and find themselves trapped in an endless cycle of payments.

People just getting a start in their careers often end up saddled with debts, and just looking at pamphlets spread around the financial aid offices every college will show you how. Student loans in the U.S. alone totaled over \$1.74 trillion by the second quarter of 2024, according to the Federal Reserve (Safier). To put this into further perspective, the national debt of the entire country of Sweden totals only just over \$1 trillion (CEIC Data). Paying off a country's worth of debt is a lot of ask of people who are just starting to learn to get around on their own, much less while they focus on other costs like rent and food using an entry-level income.

Ultimately, the problem of financial literacy breaks down into three major components: a lack of education, a lack of planning, and a lack of clarity in how debt works. This is where *CreditTrax* comes in to help by solving each part of the problem all in one place. To improve a user's education, *CreditTrax* will find recourses and offer learning cues to help guide people toward resources that will best help them learn how to budget and pay. To improve a user's planning, *CreditTrax* will badges to help give a user goals to strive toward, as well as offer custom notification settings that will help users remember to pay bills on time. To clear up how debts work for a user, *CreditTrax* will use custom learning algorithms to create tools that allow

users to actually *see* how their actions will affect their debts, ranging from graphs of how past payments helped to what-if projections to help visualize what future payments can affect.

In the end, all of us working on *CreditTrax* realize that debt is a large problem to conquer all at once. However, we also believe that by taking steps and breaking the problem down into bite-sized pieces, we can help people make progress at a pace that works best for them.

2 CreditTrax Product Description

[WIP]

2.1 Key Product Features and Capabilities

2.2 Major Components (Hardware/Software)

2.2.1 Major Functional Components

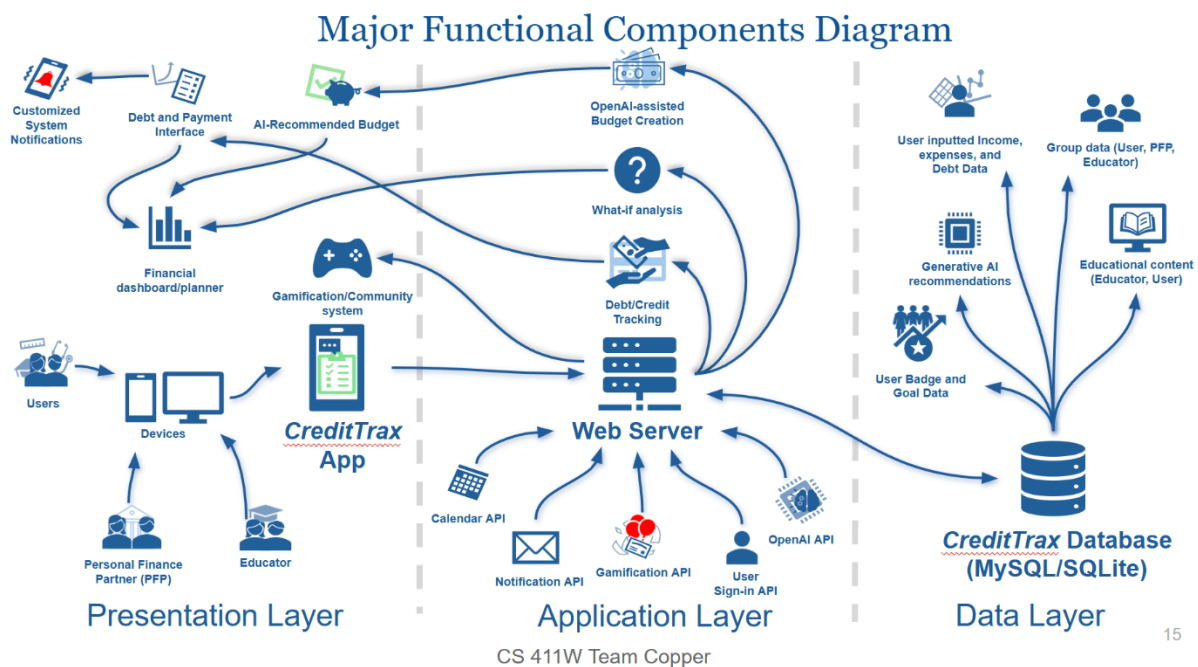


Figure 1: Major Functional Components Diagram

2.2.2 Front-End Development Hardware, Tools, and Languages

2.2.3 Back-End Development Hardware, Tools, and Languages

3 Identification of Case Study

[WIP]

4 Product Prototype Description

[WIP]

4.1 Prototype Architecture (Hardware/Software)

4.2 Prototype Features and Capabilities

4.3 Prototype Development Challenges

5 Conclusion

[WIP]

6 Glossary

Annual Inflation Rate: The percentage increase in the cost of goods over the course of a year.

APR (Annual Percentage Rate): The annual rate charged for borrowing money as a percentage of the total borrowed amount.

Credit Score: A three-digit number that reflects an individual's creditworthiness based on their credit history, influencing lenders' decisions on loan approvals and interest rates.

Debt: Money that is borrowed and must be repaid, typically with interest.

Financial Literacy: A strong understanding of essential financial skills and concepts, such as budgeting, saving, and debt management.

Financial Management: The process of budgeting, saving, and monitoring personal finances to achieve one's financial goals.

Financial Uncertainty: The fear or concern about one's financial situation, often relating to income, debt, or future stability.

Student Loans: Money borrowed by an individual for educational purposes (for tuition, transportation, textbooks, etc.) which must be repaid with interest.

"What-if" Analysis: A technique that allows users to simulate various (financial) scenarios and visualize their potential outcomes.

Young Adults: Individuals between the ages of 18 to 34 who are in the workforce and have limited experience with personal finances.

Young Professionals: Young adults aged 18-34 who are in the workforce, in college, or have recently graduated.

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