



GINA CODY
SCHOOL OF ENGINEERING
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SOEN 6481: Financial Literacy App

“FinWise”

Group 11

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Problem Identification Report for Financial Literacy App

Objective:

The objective of the Financial Literacy App is to empower individuals by providing them with a comprehensive platform that enhances their understanding of personal finance, investment strategies, and portfolio management. The app aims to bridge the gap between financial knowledge and real-world application by offering interactive learning modules, real-time portfolio comparison tools, and advanced investment analyzers.

By using a user-friendly interface, sophisticated analytics, and scenario-based simulations, the app enables users to build financial confidence and make informed decisions. The platform offers tailored solutions for various learning levels and financial objectives, making it suitable for young adults, early professionals, financial advisors, and educational institutions.

1. Problem Statement

1.1 Clear Articulation of the Identified Problem

In the fast-paced financial landscape of today, young adults and early professionals are increasingly required to navigate complex financial decisions related to debt management, investment planning, and wealth creation. However, studies have shown that **over 60% of millennials lack basic financial literacy**, resulting in poor money management and insufficient long-term planning. For instance, a survey by the *National Financial Educators Council* found that, on average, respondents reported losing over **\$1,200 annually** due to a lack of financial knowledge, which translates into a significant loss of opportunities for building wealth over time.

Our Financial Literacy App addresses this problem by combining **real-world investment simulations** with **structured, interactive learning paths**, specifically designed to cater to varying levels of financial literacy. For instance, the app provides modules on understanding debt management, evaluating investment opportunities, and building a sustainable savings

plan. Users can simulate investment strategies in a risk-free environment, conduct real-time portfolio comparisons, and gain insights through scenario-based learning, bridging the gap between knowledge and application.

1.2 Concise Description of its Significance in the Chosen Domain

Financial illiteracy is a widespread issue with profound consequences, especially in the finance domain. According to a report by *Standard & Poor's Global Financial Literacy Survey*, over **66% of adults worldwide** lack basic financial literacy, leading to poor decision-making, financial instability, and increased vulnerability to fraud and debt traps. This problem is particularly acute among younger generations—millennials and Generation Z—who, despite having higher levels of formal education, are often burdened with **over \$1.5 trillion in student loan debt** in the United States alone. As a result, they face difficulties in saving for emergencies, are prone to making risky financial decisions, and are significantly underprepared for retirement planning.

The **Financial Literacy App** is uniquely positioned to address this gap by providing a structured, interactive, and engaging platform that transforms complex financial topics into easily digestible learning experiences. It offers not just theoretical knowledge but also practical tools, such as **budgeting trackers, real-time portfolio analyzers, and investment simulators**, which allow users to apply their learning in a safe, simulated environment. This dual approach of education and application is essential for real-world financial success.

Given the rise of **digital financial tools** and the growing demand for **self-directed financial education**, the Financial Literacy App is highly significant in the current financial landscape. It aims to foster a generation of informed and financially responsible individuals who can make sound financial decisions, avoid debt traps, and build sustainable wealth. By leveraging interactive technology, the app fills a crucial gap in the domain, where traditional education methods have often failed to engage or equip users with the skills needed for long-term financial stability.

2. Stakeholder Analysis

2.1 Identification of Key Stakeholders Affected by the Problem or Benefiting from the Opportunity

1. Primary Stakeholders:

- **Young Adults (18-35):** This demographic consists of recent graduates, college students, and young professionals who are just beginning to handle their own money. Many lack basic financial knowledge, making them susceptible to poor financial decisions, such as accumulating high-interest debt or missing out on investment opportunities. The app will help these individuals build a strong foundation in budgeting, saving, and investing.
- **Early Professionals (25-40):** These users are relatively new to handling their own finances and may have just started to explore long-term financial planning. They face challenges like optimizing savings, managing student loans, and building investment portfolios.

2. Secondary Stakeholders:

- **Educational Institutions:** Schools, universities, and other academic organizations that aim to incorporate financial literacy into their curriculum. These institutions often struggle with providing engaging, practical financial education.
- **Parents and Guardians:** Adults responsible for teaching financial skills to children and young adults. They seek user-friendly resources to help educate their dependents on money management, budgeting, and investing.

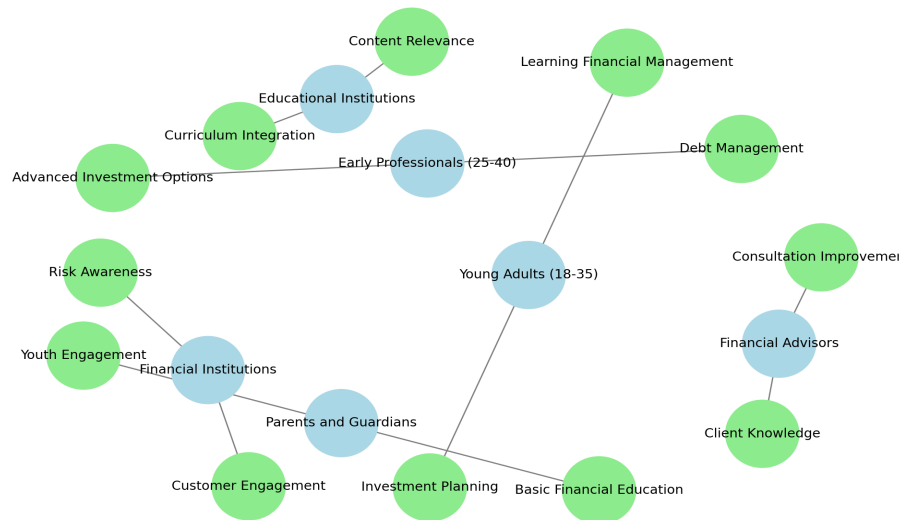
3. Tertiary Stakeholders:

- **Financial Advisors:** Professionals who work with clients on financial planning, investment strategies, and wealth management. Financially literate clients can have more meaningful consultations, enabling advisors to focus on advanced strategies rather than basic education.
- **Financial Institutions:** Banks, investment firms, and credit unions that want to promote financial literacy to build stronger relationships with their customers. By supporting a financially literate customer base, these institutions can reduce default risks, increase customer satisfaction, and enhance engagement.

2.2 Brief Overview of Their Interests and Concerns

Stakeholder Group	Interests	Concerns
Young Adults	Learning basic financial management skills.	App content may be too complex or overwhelming.
Early Professionals	Gaining practical budgeting and investment skills.	The app must cater to varying levels of financial knowledge.
Educational Institutions	Using the app as a supplementary learning tool in financial courses.	Ensuring content aligns with academic standards.
Parents/Guardians	Educating children on financial topics.	Content should be age-appropriate and engaging.
Financial Advisors	Clients with a better understanding of basic financial concepts.	Potential misinterpretation of complex topics.
Financial Institutions	Increasing customer engagement through educational tools.	Apps must maintain neutrality and avoid brand-specific bias.

Stakeholder Relationship Diagram for Financial Literacy App



3. Relevance to Software Solution

3.1 Explanation of How the Problem or Opportunity Can Be Addressed Through Software Development

The **Financial Literacy App** will address the problem by providing a comprehensive, interactive platform that combines educational content with practical, hands-on tools. Important parts of the software consist of:

1. **Interactive Learning Modules:** Covering topics like budgeting, debt management, and investing, these modules use step-by-step instructions, real-world scenarios, and quizzes to build foundational financial skills.
2. **Gamified Financial Quizzes:** Short, engaging quizzes reinforce learning, track user progress, and maintain engagement, making the process enjoyable.
3. **Budgeting Tools:** A dynamic budget planner enables users to set goals, track expenses, and visualize their spending habits, offering personalized recommendations based on financial behavior.
4. **Investment Simulations:** A virtual trading environment allows users to simulate investment strategies, experiment with different assets, and learn risk management—without real-world financial risks.
5. **Personalized User Profiles:** Tailored learning paths and progress tracking adapt to each user's specific financial needs, ensuring a unique and relevant learning experience.

3.2 Initial Thoughts on the Scope of the Software Solution

The **Financial Literacy App** is designed to offer a comprehensive learning and simulation environment to empower users to make informed financial decisions. The scope of the application is defined by the following core features, each focusing on a unique aspect of financial literacy:

1. Interactive Learning Modules

- **Description:** A set of structured modules covering topics such as budgeting, debt management, credit scores, investment basics, and retirement planning.

- **User Interaction:** Users can navigate through each module, read educational content, watch video tutorials, and complete quizzes after each topic to reinforce their understanding.
- **Example Feature:** A “Budgeting 101” module that includes an expense tracker to help users categorize and analyze their spending habits as they progress through the lessons.

2. Real-Time Portfolio Analyzer

- **Description:** A tool that allows users to import their own portfolio or create a simulated one to analyze risk, performance, and diversification.
- **User Interaction:** Users can select different investment assets (stocks, bonds, mutual funds), conduct scenario analysis, and view graphical representations of how changes impact their portfolio.
- **Example Feature:** A “Stress Testing” functionality where users can apply various market scenarios (e.g., recession, market rally) and visualize the effects on their portfolio in real-time.

3. Investment Simulator

- **Description:** A virtual trading platform where users can practice investing with virtual money to understand different investment strategies without any real-world financial risk.
- **User Interaction:** Users start with a set amount of virtual cash, choose assets to invest in, and track the performance over time. They can experiment with stocks, bonds, and ETFs.
- **Example Feature:** Users can simulate investment strategies like dollar-cost averaging and compare outcomes based on historical market data.

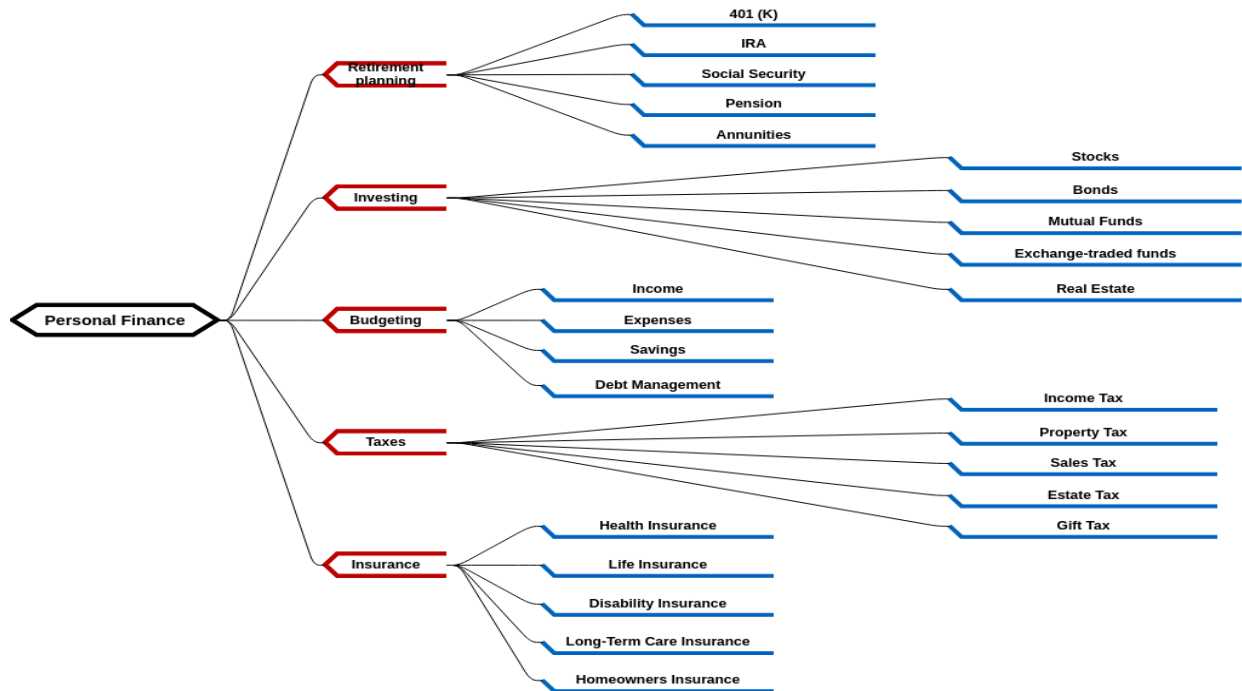
4. Personalized Learning Paths and Recommendations

- **Description:** Tailored content and features based on user profile data, such as age, financial goals, income, and spending patterns.
- **User Interaction:** After an initial onboarding questionnaire, the app recommends specific learning modules and tools that align with the user’s needs.

- **Example Feature:** Users receive personalized tips and content, such as “Investment Strategies for Beginners” for new investors or “Advanced Retirement Planning” for experienced users.

5. Gamified Learning and Achievements

- **Description:** Incorporates gamification elements to keep users engaged, such as badges, points, and leaderboards.
- **User Interaction:** Users earn points by completing modules, participating in quizzes, and achieving financial milestones, which can be displayed on a public leaderboard.
- **Example Feature:** "Achievement Badges," such as "Debt-Free Hero" for users who finish the debt management module and "Investment Guru" for those who understand sophisticated investing techniques.



Market Analysis Report for Financial Literacy App

Objective:

Perform an in-depth market analysis to understand the target market, potential users, and competitors in the chosen field. The goal is to identify the primary market segments for the Financial Literacy App and assess the competitive landscape in order to appropriately position the solution.

2. Target Audience Identification

Definition of the Primary Target Audience for the Software Solution

The **Financial Literacy App** is designed to cater to a diverse group of users with varying levels of financial knowledge and goals. Here's a detailed description of the primary target audiences, along with specific examples of their typical profiles, industries, and lifestyles:

1. Young Adults (Ages 18-35)

- **Typical User Profile:** College students, recent graduates, and early professionals looking to build a strong financial foundation.
- **Industry/Context:** They are often just starting their careers, working in entry-level positions across industries like technology, healthcare, finance, and retail.
- **Lifestyle:** This group is typically tech-savvy, highly engaged with digital tools, and seeks flexible, accessible solutions for self-directed learning.
- **Example:** Sarah, a 27-year-old software engineer, wants to manage her student loans and start investing. She uses the app's budgeting module to set savings goals and the investment simulation tool to explore low-risk investment options.

2. Early Professionals (Ages 25-40)

- **Typical User Profile:** Individuals with stable jobs and some disposable income, aiming to optimize their financial planning.

- **Industry/Context:** Professionals working in mid-level positions in industries such as finance, engineering, marketing, and healthcare.
- **Lifestyle:** They are motivated to achieve long-term financial stability, focusing on debt reduction, saving for a home, and retirement planning.
- **Example:** James, a 32-year-old project manager, wants to manage his mortgage and build a diversified investment portfolio. He uses the app's portfolio analyzer to evaluate his current investments and create a risk-adjusted strategy.

3. Educational Institutions

- **Typical User Profile:** High schools, universities, and community colleges looking to integrate financial literacy programs into their curriculum.
- **Industry/Context:** Educational bodies aiming to enhance their curriculum with digital tools that engage students and provide practical financial education.
- **Lifestyle:** These institutions seek structured, adaptable educational resources that can supplement traditional classroom learning.
- **Example:** Green Valley University integrates the app into their freshman orientation program, providing students with modules on budgeting, savings, and credit management.

4. Parents and Guardians

- **Typical User Profile:** Parents or guardians of teenagers and young adults who want to educate their dependents on financial responsibility.
- **Industry/Context:** Adults working in various industries who are looking for reliable resources to teach their children personal finance.
- **Lifestyle:** They value structured, user-friendly resources that can simplify complex financial concepts for younger audiences.
- **Example:** Linda, a mother of two teenagers, uses the app's interactive quizzes and real-world scenarios to teach her children the importance of saving and investing early.

Demographic and Psychographic Characteristics of the Target Audience

1. Demographic Characteristics

1. Age Groups:

- **Young Adults (18-35):** Primarily students, new graduates, and early professionals who are starting their financial journey.
- **Early Professionals (25-40):** Users looking to optimize their savings, investments, and long-term financial planning.

2. Gender:

- The app is designed to be inclusive, catering to both men and women equally. Financial challenges and decision-making tendencies can vary based on gender, and the app provides tailored advice to meet these needs.

3. Income Levels:

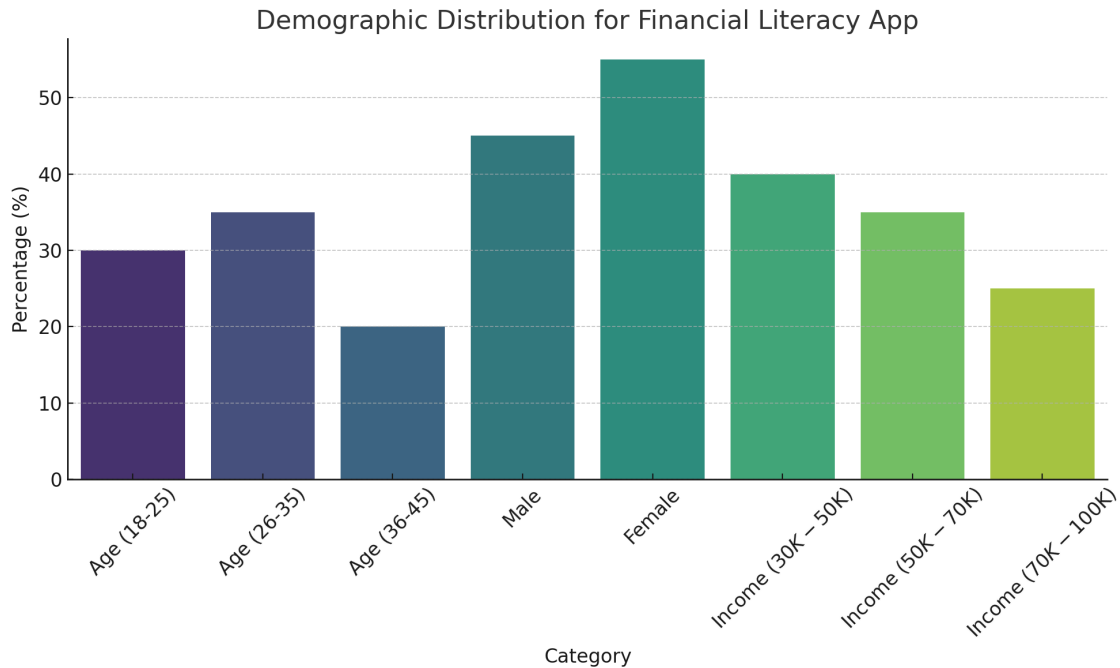
- **Low-Income Users:** Focus on budgeting tools and basic financial education to maximize limited resources.
- **Middle-Income Users:** Emphasis on debt management, savings strategies, and investment basics to build wealth.
- **High-Income Users:** Advanced modules on wealth management, tax optimization, and retirement planning.

4. Geographic Location:

- The app is designed for global users but focuses primarily on North American and European markets, considering country-specific financial products and regulations.

5. Education Level:

- The content is structured to be accessible to users with varying levels of financial literacy, from high school graduates to experienced professionals.



2. Psychographic Characteristics

1. Values:

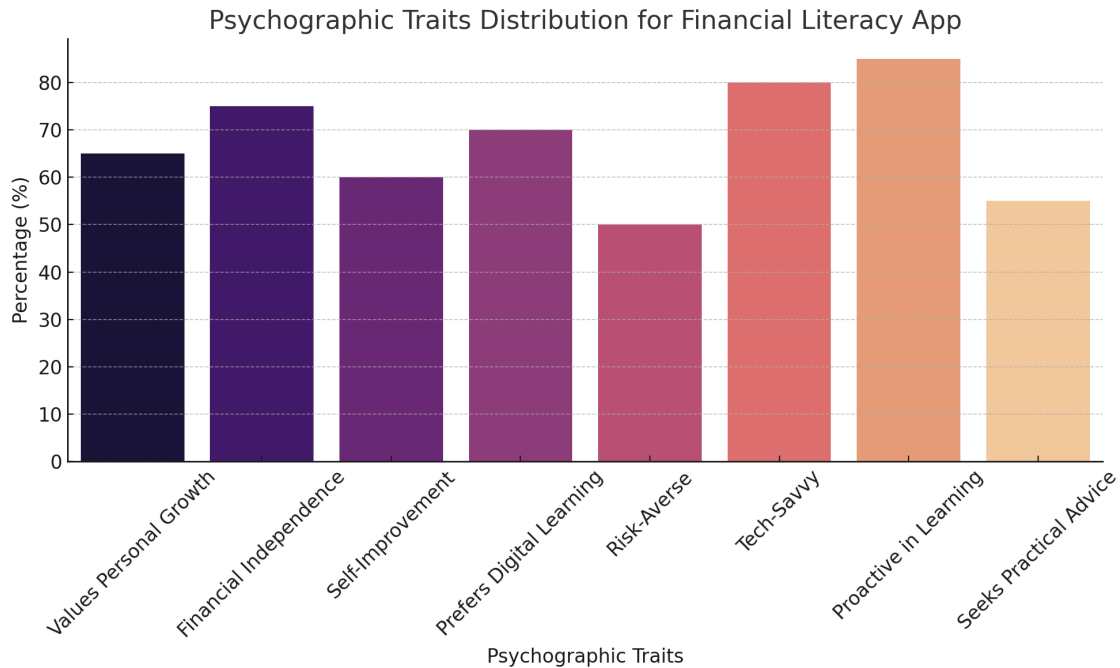
- Users value **financial stability, independence, and long-term security**. The app helps by promoting informed decision-making and practical application of financial concepts.

2. Lifestyles:

- **Tech-Savvy and Self-Learners:** Users who prefer digital, interactive learning solutions rather than traditional classroom settings.
- **Busy Professionals:** Individuals with limited time who seek quick, digestible content that can be applied immediately.
- **Family-Oriented Individuals:** Users who prioritize financial planning for their families and are looking for structured guidance on savings, insurance, and retirement.

3. Behavior:

- Users are proactive and motivated to learn about managing money but may lack structured resources or have a fragmented understanding of financial topics.
- The app incorporates **gamification elements** (e.g., quizzes, achievement badges) to keep users engaged and encourage continuous learning.



3. Competitor Analysis

Identification and Analysis of Competitors Offering Similar Solutions

1. Mint

- **Business Model:** Freemium model offering free budgeting and tracking tools, with optional premium features for a fee.
- **Target Audience:** Individuals seeking basic financial management, particularly for budgeting and expense tracking.
- **Approach:** Mint offers easy-to-use tools for linking bank accounts, tracking spending, setting financial goals, and receiving personalized financial advice.
- **Key Features:**
 - Expense and income tracking
 - Budget categorization and alerts
 - Credit score monitoring
- **Strengths:**
 - Established brand, widely used, and free access
 - Easy-to-use interface with strong data integration capabilities

- **Weaknesses:**
 - Limited features for investment planning or advanced financial literacy topics
 - **Opportunities:**
 - Adding educational content and investment simulations to expand into financial literacy
 - **Threats:**
 - Emerging players offering similar free budgeting tools with added investment management features
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2. YNAB (You Need A Budget)

- **Business Model:** Subscription-based platform focusing on budgeting education and debt management strategies.
- **Target Audience:** Users motivated to achieve debt reduction, savings optimization, and financial goal setting.
- **Approach:** YNAB emphasizes the importance of budgeting using its signature "Four Rules" methodology, providing extensive support through workshops and a strong user community.
- **Key Features:**
 - Zero-based budgeting system
 - Real-time expense tracking
 - Financial planning and debt reduction tools
- **Strengths:**
 - Strong budgeting focus and supportive community
 - Educational resources for building good financial habits
- **Weaknesses:**
 - High subscription costs, which may deter price-sensitive customers
- **Opportunities:**
 - Potential to expand features to cover investment planning and financial literacy content
- **Threats:**

- Price-sensitive customers may switch to cheaper or free alternatives
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3. Investopedia Academy

- **Business Model:** Paid online courses focusing on various finance and investment topics.
 - **Target Audience:** Individuals looking to build in-depth knowledge in specific areas, such as investing, trading, and personal finance management.
 - **Approach:** High-quality educational content delivered by industry experts, focusing on theoretical and technical knowledge.
 - **Key Features:**
 - Specialized courses on stock trading, options, and retirement planning
 - Certificate of completion for career advancement
 - Access to expert advice and community forums
 - **Strengths:**
 - High-quality content and experienced instructors
 - Wide variety of specialized financial topics
 - **Weaknesses:**
 - High course fees and limited practical, hands-on learning experiences
 - **Opportunities:**
 - Partnering with educational institutions to make courses more accessible
 - **Threats:**
 - Free educational platforms offering similar content (e.g., Coursera, Khan Academy)
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4. Acorns

- **Business Model:** Micro-investing platform with a subscription fee based on the service tier.
- **Target Audience:** Millennials and new investors looking for easy, automated investment solutions.

- **Approach:** Simplifies investing by rounding up spare change from everyday purchases and automatically investing it into diversified portfolios.
- **Key Features:**
 - Automated micro-investing
 - Personalized portfolios based on risk tolerance
 - Integrated educational resources
- **Strengths:**
 - Accessible, user-friendly investment options
 - Automates savings and investment processes
- **Weaknesses:**
 - Limited financial literacy content compared to other platforms
- **Opportunities:**
 - Building comprehensive learning modules to complement the investing feature
- **Threats:**
 - Competitors are incorporating microinvesting into their offerings.

Assessment of Competitor Strengths, Weaknesses, Opportunities, and Threats (SWOT)

Competitor	Strengths	Weaknesses	Opportunities	Threats
Mint	Established brand, free access, easy to use	Limited investment advice	Adding investment simulation	New players offering similar features
YNAB	Strong budgeting focus, supportive community	Expensive subscription	Expand into investment education	Price-sensitive customers
Investopedia Academy	High-quality content, expert instructors	High cost, limited practical application	Partnering with educational institutions	Free educational content providers
Acorns	Automated investing, accessible to beginners	Limited financial literacy resources	Building comprehensive learning modules	Competitors adding automated investing

Challenging Component: Feature Comparison Matrix

Feature	Financial Literacy App	Mint	YNAB	Investopedia Academy	Acorns
Interactive Learning Modules	✓	✗	✗	✓	✗
Budgeting Tools	✓	✓	✓	✗	✗
Investment Simulations	✓	✗	✗	✓	✓
Personalized Learning Paths	✓	✗	✗	✗	✗
Gamified Quizzes	✓	✗	✗	✗	✗

4. Business Values

Definition of the Unique Selling Points (USPs) that Set the Proposed Solution Apart

The **Financial Literacy App** stands out in the competitive landscape through the following clearly articulated USPs, which are specific, differentiating, and backed by a real-world analysis of gaps identified in competitor solutions:

1. Comprehensive Learning Paths:

- **Description:** The app offers structured learning paths, covering topics from basic financial literacy to advanced investment strategies. This ensures that users at all stages of their financial journey can benefit, making the app suitable for beginners as well as experienced users looking to refine their financial knowledge.

- **Differentiation:** While competitors like Mint and Acorns provide financial tools, they lack a structured educational approach. Our app's focus on sequential learning provides a unique and systematic method for users to build and apply their financial knowledge progressively.

2. **Real-World Investment Simulations:**

- **Description:** Provides users with a hands-on, risk-free environment to test out various investment strategies and portfolio management scenarios. This feature bridges the gap between theoretical learning and practical application.
- **Differentiation:** Unlike Investopedia Academy's theoretical focus or Acorns' micro-investing approach, the Financial Literacy App empowers users to experiment and learn from simulated trading without any real-world financial risks.

3. **Interactive and Gamified Learning:**

- **Description:** Quizzes, points, and rewards are integrated into the learning modules to keep users engaged and motivated. Gamification techniques are used to track progress and encourage continued learning.
- **Differentiation:** Competitors like YNAB and Mint offer static tools for budgeting and tracking, but they lack engaging, gamified elements. This makes our app stand out by maintaining user interest and providing a more immersive learning experience.

4. **Personalized Financial Advice:**

- **Description:** The app tailors content, advice, and actionable recommendations based on user inputs, such as financial goals, age, income, and risk tolerance. This personalized approach ensures that each user receives guidance that is relevant to their specific financial situation.
- **Differentiation:** While some platforms offer generic advice, the Financial Literacy App's ability to provide personalized content enhances its effectiveness, making it a one-stop solution for users seeking tailored financial strategies.

These unique selling points position the Financial Literacy App as a comprehensive, engaging, and user-focused solution that bridges the gaps left by its competitors, offering both educational depth and practical applicability in a single platform.

Articulation of the Value Proposition for Potential Users

The **Financial Literacy App** provides a compelling value proposition by addressing the core needs of users who seek comprehensive, accessible, and practical financial education. According to market research, over 60% of millennials and Generation Z express a desire to improve their financial literacy but feel overwhelmed by the complexity of existing resources. Our app transforms this complexity into a structured and engaging learning path, combining interactive modules, real-world simulations, and dynamic budgeting tools to bridge the gap between knowledge and application.

Unlike traditional financial platforms that focus solely on budgeting or investing, the Financial Literacy App's holistic approach covers a wide spectrum of financial topics, allowing users to build a strong foundation in money management, investment planning, and risk evaluation. This makes the app a one-stop solution, offering both education and actionable insights tailored to individual user profiles. The value proposition is further enhanced by the inclusion of gamified elements that keep users motivated and engaged, resulting in higher retention and successful learning outcomes.

How the Value Proposition Translates into Long-Term Benefits

1. **Cost Savings:** By providing a comprehensive suite of financial tools and resources, the app eliminates the need for multiple subscriptions to separate services (e.g., budgeting, investment courses), offering a cost-effective alternative for users to gain financial knowledge and skills.
2. **Improved User Experience:** The app's intuitive design and personalized content create a smooth user experience, ensuring that complex financial concepts are delivered in an easily digestible format. This encourages continued usage, as users feel more confident in navigating the financial landscape.
3. **Competitive Advantage:** The app's unique combination of **education, interactive tools, and investment simulations** sets it apart from competitors like Mint and Acorns. By integrating all these elements into one platform, the app is positioned as a leader in the financial literacy domain, appealing to a broader audience seeking a comprehensive solution. This differentiation ensures sustained growth and a strong market presence.