

Personal Finance Management Application Integrating an AI-based Assistant

Margaret Sivova and Vasil Ganev

Abstract-The development offers an innovative solution for managing personal finances through a mobile and web-based FinEdge application, which combines a convenient user interface with functionalities based on artificial intelligence.

The application was developed using technologies such as React for the client side and .NET Core Web API for the server logic. Its main goal is to assist users in tracking income and expenses, analyzing financial habits, creating budgets and achieving long-term financial goals. The integrated AI assistant is a significant advantage, as it provides personalized financial advice, identifies spending patterns and warns of potential risks.

FinEdge stands out from competing applications such as Spendee, Moneyfy and 1Money through its combination of ease of use, rich functionality and intelligent assistance. The application offers data visualization, automated reports, a high level of security and accessibility from both mobile devices and desktop platforms.

The application is addressed to a wide audience – from beginners to advanced users who are looking for a reliable, adaptable and technologically modern solution for managing their personal finances.

Keywords-Web-based application, AI assistant, personal finance management.

I. INTRODUCTION

Financial literacy and the ability to effectively manage personal remedies are the challenges that people in the modern world face daily. With the increasing complexity of income, expenses and financial goals, more and more users are looking for solutions to facilitate tracking and optimizing their personal budget.

Technological progress and access to artificial intelligence open new opportunities for personalized and automated approaches in this area.

In this context, the web-based FinEdge Personal Finance Management Application is developed as an innovative platform that combines a convenient user interface with powerful analytical instruments and artificial intelligence / AI / functionality aimed at better financial self-government.

II. PURPOSE OF THE APPLICATION

FinEdge's main objective is to develop a modern, intuitive and intelligent web -based personal finance management application, which combines classic budgeting principles with the capabilities of modern technologies and artificial intelligence. At the center of the concept is the desire to provide end users with a means of better understanding, planning and optimizing their income and expenses, as well as for achieving greater financial stability.

The app is aimed at a wide audience-by people who are just beginning to monitor their personal finances, to those

who are looking for a more efficient and personalized way of financial planning. For this purpose, FinEdge is designed with exceptional care of the user experience - the offered interface is intuitive, visually clear and easy to use, both on desktop devices and on mobile platforms.

One of the key objectives of the development is the integration of AI assistant based on Openai technology [3] to provide personalized financial recommendations. This intelligent component analyzes consumer behavior, transactions and budget purposes, and based on well-established methodologies such as 50/30/20, Zero-Based Budgeting and Pay-Yourself-First, creates meaningful and applicable tips. This approach aims not only at the automation of personal finance management, but also to build long -term habits for saving and responsible consumption.

FinEdge also aims for the technical perfection - using modern technologies such as .NET Core, React, Entity Framework and Microsoft SQL Server guarantees security, speed and scalpiness of the system. In addition, the architecture of the application is built modular, for the purpose of future expansion - for example, with mobile application, currency conversions, multilingness or integration with external banking services.

In summary, the goal of FinEdge is to create not just a tool but a digital financial partner - a platform that actively assists the user in the process of financial self -cultivation through a combination of easy use, rich functional set and intelligent personalization.

III. ANALYSIS OF APPLICATION REQUIREMENTS

FinEdge design is based on clearly defined functional and non -functional requirements that guarantee efficiency, security and convenience for the end user.

Among the basic functional requirements stand out:

- Ability to register and edit a profile;
- Creation and management of financial accounts, categories and transactions;
- Integration with AI assistant who provides personalized advice according to the behavior and chosen financial methodology of the user.

The interface is designed to be intuitive, adapted for mobile devices and easy to navigate, even by users without technical experience.

In terms of non -functional requirements, the project relies on a high level of security through the use of hash passwords and access control. Productivity is a priority-the system must work quickly and reliably even at higher loads. Support also plays an important role - the code architecture is structured and well documented, which facilitates future updates and extensions.

Another key aspect is the compatibility - Finedge is built so that it can easily integrate with external libraries and services (eg Openai, Kendoreact), as well as adapt to various browsers and devices.

At a database level, Microsoft SQL Server was selected because of its stability, security and complete compatibility with .NET ecosystem. The data is structured in a relational model that provides a clear connection between users, transactions, categories and recommendations, which allows for effective management and analysis of financial information.

On Fig. 1. The database structure is shown.

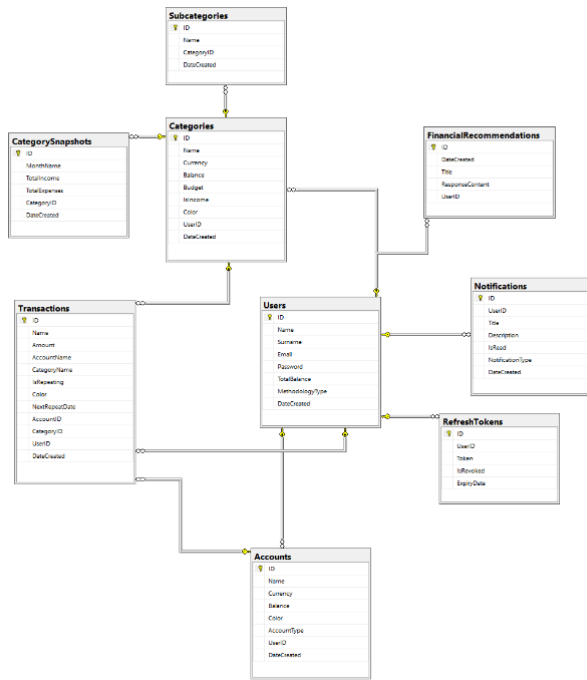


Fig. 1. Links between the database tables of the application

IV. INTEGRATION WITH OPENAI API AND LARGE LANGUAGE MODELS (LLM)

One of the key innovations in the Finedge project is the integration of an artificial intelligence assistant based on Openai API [1] and a large language model (LLM), which provides personalized financial recommendations for users. This functionality is designed to upgrade the traditional management of finance through intelligent analysis of behavioral and transaction data.

The steps to create AI generated recommendations are the following:

1. The client sends a request with a Prompt entered and a selected date.
2. The server receives the request and takes the data from the current user.
3. These data are serialized and combined with additional instructions.
4. The server sends the message to Openai API.
5. LLM Returns an answer - a brief financial recommendation.
6. The server records the recommendation at the base and sends the answer back to the client.

On Fig. 2. The process is shown when creating recommendations generated by artificial intelligence.

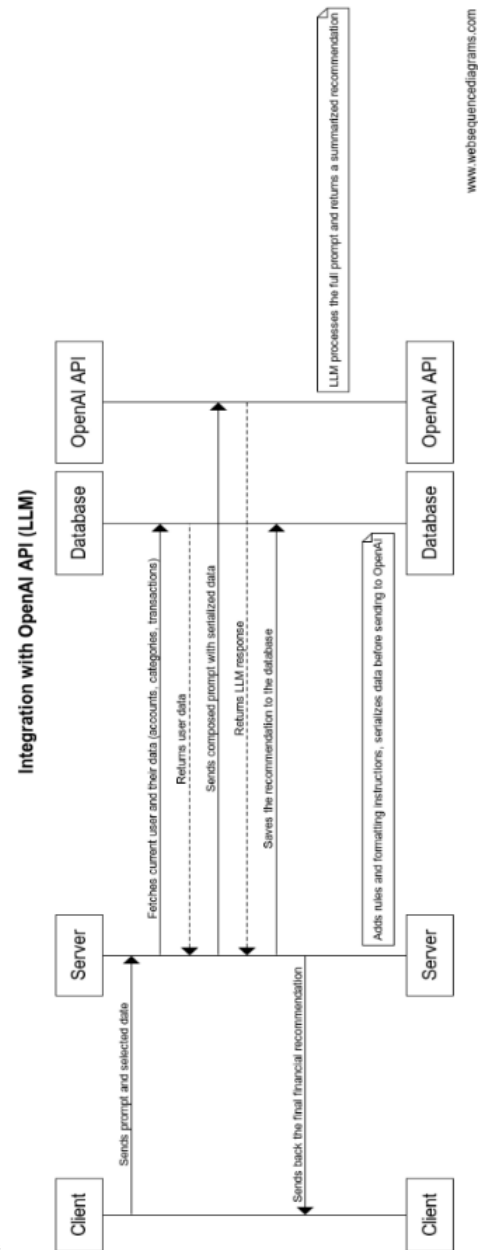


Fig. 2. The process is shown when creating recommendations generated by artificial intelligence.

V. FUNCTIONALITIES

At the heart of the Finedge application are three main modules - accounts, categories and transactions, each of which is represented via a separate page with an intuitive interface.

The Account page allows the user to create and manage their financial accounts - bank, cash, investment and others. Each account contains information as a name, current balance, type and currency, and is visualized by color codes for easier orientation.

On the categories of categories, the user can define semantic groups for their revenue and expenses, such as "food", "transport" or "salary". Each category has a budget and type (profitable or spending), which facilitates the tracking of financial habits.

Transactions are the actual financial actions - revenue, expenses or repetitive payments that the consumer registers manually. Each transaction is related to a specific account

and category, and is immediately reflected in the general balance.

The page interface allows for the quick filtration, visualization and editing of all entries entered, thus receiving the user a complete picture on their financial status.

On Fig. 2. Fig. 3., Fig. 4. And Fig. 5. The accounts, categories and transactions are shown.

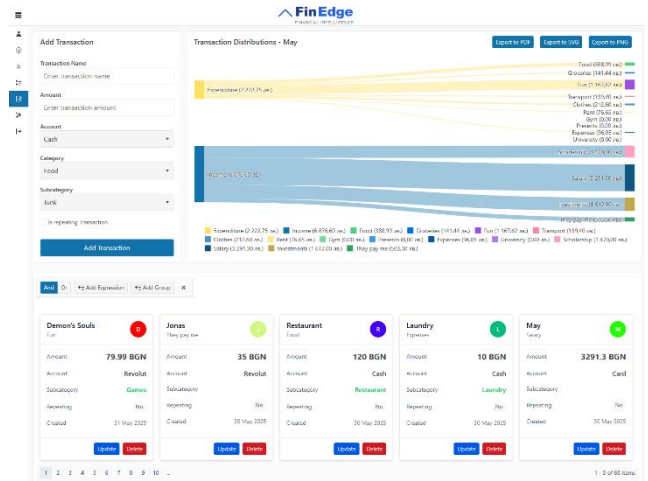
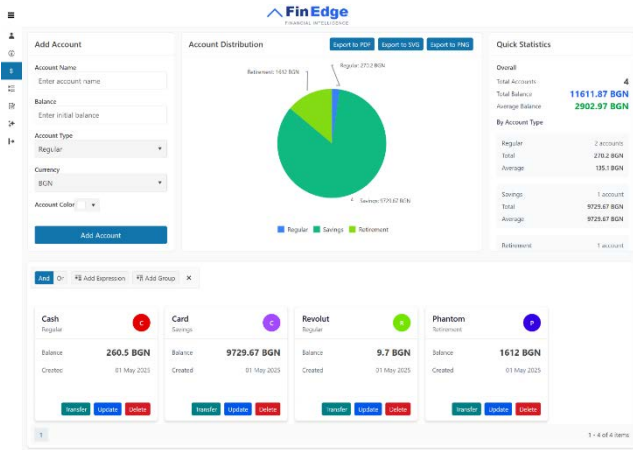


Fig. 5. The Transactions page

VI. CONCLUSION

The Finedge app demonstrates how modern web technologies and artificial intelligence can be effectively applied in the field of personal finance.

The system offers an intuitive interface, automated analytics and personalized AI recommendations that help users in building sustainable financial habits. The use of established methodologies, combined with adaptive logic and integration with Openai, turns Finedge into an innovative and scale solution.

The architecture created allows for easy upgrading with new features such as mobile app, currency conversions and improved accessibility. The project sets a stable foundation for future development and real market .

REFERENCES

- [1] <https://docs.microsoft.com>, Microsoft Docs, “.NET API documentation” (accessed on 11.7.2025).
- [2] <https://react.dev>, React Official Documentation, (accessed on 11.7.2025).
- [3] <https://platform.openai.com/docs>, OpenAI API documentation (accessed on 11.7.2025).

Fig. 4. The Categories page

