



ISSN: 2454-9940



**INTERNATIONAL JOURNAL OF APPLIED
SCIENCE ENGINEERING AND MANAGEMENT**

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WALLET WATCHDOG

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Abstract

In today's world, where digital payments through platforms like PhonePe, Google Pay, and Paytm have become ubiquitous, keeping track of expenses has become a daunting task. With the increasing volume of transactions and diverse spending scenarios, individuals often find it challenging to manage their finances effectively. Wallet Watchdog emerges as a solution to this modern-day predicament, offering a sophisticated expense management system. This application employs XML for front-end development, Kotlin for the backend, and Google Firebase for database integration. Utilizing SMS notifications, Wallet Watchdog prompts users to categorize expenses immediately after each transaction. Whether it's a dinner out, a grocery run, or a travel expense, users can effortlessly assign expenditures to specific variables. The app updates the home screen dynamically, providing users with a real-time overview of their total spending and individual variable expenditures. Furthermore, Wallet Watchdog introduces a proactive element to financial management by allowing users to set spending limits. If the total expenditure exceeds the pre-defined limit, the app generates instant alerts, ensuring users stay informed about their financial health. In a world where financial transactions are increasingly digital, Wallet Watchdog empowers individuals to take charge of their finances, promoting responsible spending practices and long-term financial stability.

I INTRODUCTION

Wallet Watchdog is an intuitive expense management system designed to simplify the tracking and control of personal finances. Through its user-friendly interface and advanced features, Wallet Watchdog provides real-time transaction notifications and categorizes expenditures using predefined variables. The system seamlessly integrates with SMS-based transaction monitoring, enabling users to receive pop-up notifications after every debit transaction from digital payment platforms. Wallet Watchdog offers expenditure analysis through interactive pie charts, providing clear insights into spending patterns. With its emphasis on ease of use and visual representation of spending data, Wallet Watchdog empowers users to manage their finances effectively, promoting responsible spending habits and long-term financial well-being.

Wallet Watchdog is driven by several key objectives aimed at simplifying personal finance management and empowering users to make informed financial decisions. Firstly, the system endeavors to streamline expense tracking and control through its user-friendly interface and advanced functionalities. Providing real-time transaction notifications is another core

objective, ensuring users stay up-to-date with their spending activities. Additionally, Wallet Watchdog categorizes expenditures using predefined variables, facilitating easy organization and analysis of expenses. Integrating seamlessly with SMS-based transaction monitoring further enhances user experience by offering pop-up notifications after every debit transaction from digital payment platforms. Moreover, the system offers comprehensive expenditure analysis through interactive pie charts, enabling users to gain clear insights into their spending patterns. Ultimately, Wallet Watchdog aims to empower users to manage their finances effectively, promoting responsible spending habits and fostering long-term financial well-being.

II EXISTING SYSTEM

Existing systems face several challenges that hinder users' ability to effectively manage their finances. One major issue is the lack of real-time expense tracking, which prevents users from monitoring their expenditures as they occur. This delay in awareness can lead to overspending and financial mismanagement. Additionally, difficulty in categorizing transactions poses

a significant challenge, making it harder for users to organize and understand their spending patterns. As a result, users may struggle to gain comprehensive insights into their financial habits, limiting their ability to make informed decisions. Moreover, the absence of effective budgetary controls further exacerbates the problem, as users find it challenging to set, track, and adhere to budget limits, increasing the risk of financial instability. Finally, the lack of automation within existing systems means that certain processes require manual intervention, leading to inefficiencies and a lack of user convenience. Addressing these challenges is crucial for developing a more robust and user-friendly financial management system. Addressing these challenges is crucial for developing a user-centric financial management system. Enhancing real-time tracking, streamlining transaction categorization, and providing comprehensive spending insights empower users to make informed decisions and achieve financial stability. Implementing effective budgetary controls and automation enhances efficiency and convenience in managing personal finances

III PROBLEM STATEMENT

Wallet Watchdog addresses the challenges individuals face in managing personal finances effectively. Traditional

expense tracking methods are often cumbersome, lacking real-time awareness and seamless integration with modern payment platforms. This leads to difficulties in understanding spending habits and making informed financial decisions. Additionally, the absence of intuitive tools for expenditure analysis hinders users from gaining insights into their spending patterns, potentially impacting long-term financial stability. Overall, these challenges underscore the need for a user-friendly, real-time expense management solution that promotes financial awareness and responsible spending habits for enhanced financial well-being

Scope

Wallet Watchdog offers a comprehensive solution for expense management, providing real-time transaction notifications, categorization of expenditures, and integration with SMS-based transaction monitoring. Additionally, it facilitates expenditure analysis through interactive pie charts and promotes responsible spending habits with its user-friendly interface. By encompassing these features, Wallet Watchdog aims to streamline the tracking and control of personal finances, empowering users to manage their money effectively for long-term financial well-being

IV PROPOSED SYSTEM

Wallet Watchdog introduces an automated expense tracking system, ensuring that users' expenditures are effortlessly recorded and categorized in real-time. By minimizing user effort, this feature enables individuals to stay informed about their financial activities without the need for manual data entry. Additionally, the platform incorporates a Variable Selection Pop-up within its user interface, allowing users to customize their experience by selecting specific options or variables according to their preferences. This feature enhances flexibility and ensures that users have control over how their expenses are managed and analysed within the system. Furthermore, Wallet Watchdog provides visual insights into spending patterns through intuitive pie charts, offering users a clear and comprehensive understanding of their financial behaviour. By presenting data in a visually appealing format, users can easily interpret and assess their expenditure habits, facilitating informed decision-making. Lastly, Wallet Watchdog prioritizes user experience by offering a user-friendly interface

designed for seamless interaction. Through intuitive design principles, the platform promotes a positive user experience, making financial management both accessible and enjoyable for individuals of all backgrounds.

Scope of proposed system

- **Automated Expense Tracking:** The system will automatically record and categorize expenses in real-time, reducing manual effort and ensuring accurate financial data management.
- **Variable Selection Pop-up:** The system will feature a user interface prompt enabling users to select specific options or variables, enhancing customization and flexibility in expense management.
- **Visualization:** Users will be able to visualize their spending patterns through intuitive pie charts, facilitating a clear understanding of financial behaviour and trends.
- **User Friendly Interface:** Wallet Watchdog will prioritize user experience by providing a user-friendly interface designed for easy navigation and interaction, ensuring

accessibility for users of all skill levels.

- **Customizable Notifications:** Users will have the option to customize notification preferences, receiving alerts about significant transactions or spending thresholds via their preferred communication channels.
- **Comprehensive Reporting:** The system will generate comprehensive reports summarizing users' financial activities, offering detailed insights and analysis for better financial planning and management.
- **Security Measures:** The system will implement robust security measures to protect users' financial data, including encryption, authentication, and authorization protocols.

Wallet Watchdog aims to provide users with a comprehensive and user-friendly platform for managing their finances effectively. By automating expense tracking, offering customization options, and providing visual insights, the system equips individuals with the tools they need to take control of their

financial well-being. With its emphasis on convenience, flexibility, and usability, Wallet Watchdog stands poised to revolutionize the way people approach expense management, promoting responsible spending practices and long-term financial stability.

V IMPLEMENTATION

1. *User Registration and Authentication:*

- Users should be able to register an account on Wallet Watchdog using their email.
- The system should provide secure authentication mechanisms, such as passwords or biometric authentication, to verify user identity.

2. *Transaction Tracking:*

- Wallet Watchdog should track transactions in real-time from linked bank accounts, credit cards, and digital payment platforms.
- It should categorize transactions automatically based on predefined variables or user-defined categories.

3. *Real-time Pop-ups:*

- Users should receive real-time notifications on their mobile devices or via email for each transaction, including debit and credit transactions.

4. Expenditure Categorization:

- The system should categorize expenditures into categories such as food, transportation, utilities, entertainment, etc., to help users understand their spending habits.

5. SMS Integration:

- Wallet Watchdog should integrate with SMS-based transaction monitoring systems to receive transaction information via SMS for users who do not use digital payment platforms.

6. Expenditure Analysis:

- The system should provide users with interactive tools, such as pie chart, to visualize their spending patterns and trends over time.

7. Data Privacy and Security:

- Wallet Watchdog should adhere to strict data privacy regulations and employ encryption

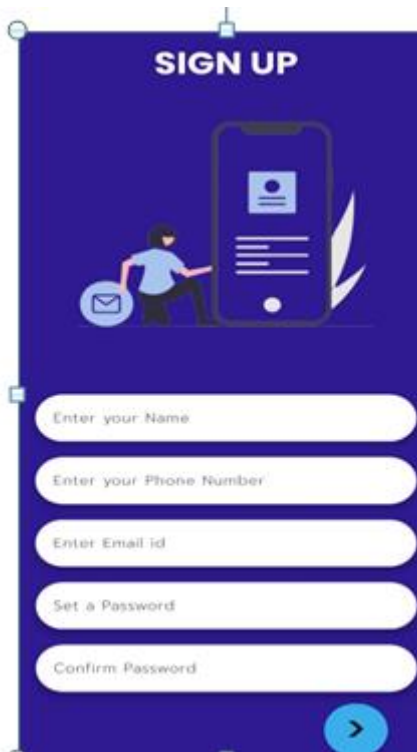
techniques to protect user data and financial information.

- It should implement secure authentication mechanisms and access controls to prevent unauthorized access to user accounts.

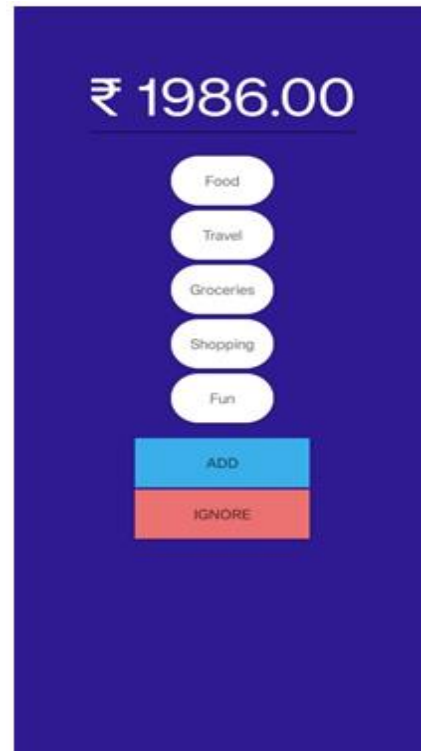
VI RESULTS



Login page



Signup page



Popup page



Main page

VII CONCLUSION

Wallet Watchdog represents a significant step forward in personal finance management, offering users a powerful and user-friendly platform to track, analyse, and optimize their expenses. With its intuitive interface, real-time notifications, and customizable features, Wallet Watchdog empowers individuals to take control of their finances, make informed decisions, and achieve their financial goals. By providing deeper insights into spending habits, streamlining expense tracking processes, and promoting responsible financial practices. Wallet Watchdog not only

provides valuable insights into spending habits but also empowers individuals to make smarter financial decisions. Wallet Watchdog serves as a valuable tool for fostering financial awareness and stability in an increasingly digital world. As we continue to innovate and expand the capabilities of Wallet Watchdog, we are committed to helping users navigate the complexities of personal finance with confidence and ease.

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