

REPORT
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Finance Manager Android App
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Abstract:

The Finance Manager Android app redefines personal finance management with its intuitive interface and versatile features. Users navigate a seamless experience, starting with a login screen featuring email, password, and captcha verification. The signup process collects essential details like name, email, and password for a streamlined onboarding.

Upon login, the home page offers a comprehensive view, allowing users to calculate monthly transactions, including income and expenses. Categorized options such as deposits, salary, bills, and more provide flexibility, catering to diverse financial scenarios. Users can select the desired month for transactions and add custom categories, ensuring adaptability. An embedded calculator simplifies income and expense input, enhancing user convenience. Notably, the app employs Google APIs for captcha verification, reinforcing security. If monthly expenses dip below 100, a notification prompts users, fostering financial awareness.

In conclusion, the Finance Manager app stands as an innovative financial management tool, balancing security and accessibility, offering a user-centric experience for effective financial control.

Introduction:

The Finance Manager application stands as a cutting-edge and holistic solution designed to navigate the intricate terrain of personal finance management. As the global economic landscape continues to evolve, individuals face increasingly diverse and dynamic financial challenges. In response to this, the Finance Manager app emerges as a powerful ally, offering users a sophisticated platform to take command of their financial well-being.

The user experience commences with a captivating splash screen, serving as the gateway to a secure login process and a streamlined signup experience. Balancing security and accessibility, this initial interaction sets the tone for the user's journey through the Finance Manager application.

Upon entering the app, users are welcomed by an intuitively designed home page that serves as the nerve center for financial activities. Here, users can seamlessly calculate and manage monthly transactions, providing a comprehensive and user-friendly financial management experience. The inclusion of income categories such as deposits, salary, and savings, along with expense categories spanning bills, clothes, house, health, food, and gifts, caters to the diverse financial needs of users.

One standout feature is the proactive notification system, alerting users when monthly expenses either touch or dip below the \$100 threshold. This real-time alert mechanism exemplifies the Finance Manager app's commitment to promoting financial awareness and empowering users to make informed decisions.

In conclusion, the Finance Manager app transcends its role as a mere technological tool. It emerges as a revolutionary force in personal finance management, addressing the multifaceted needs of individuals in their quest for financial empowerment. This report aims to dissect the core components and functionalities defining the Finance Manager experience, providing a comprehensive understanding of its design philosophy and commitment to a user-centric ethos.

Literature Survey:

The Finance Manager app is intricately designed, drawing inspiration from successful financial management applications like Monefy, MyMoney, and Wallet: Budget Planner Tracker App. These apps have significantly influenced the development of Finance Manager, shaping its user interface, functionality, and overall approach to personal finance management.

Monefy, known for its intuitive and straightforward design, has played a pivotal role in shaping the visual appeal of Finance Manager. The captivating splash screen and user-friendly interface are a testament to Monefy's influence on creating an engaging and accessible environment for users. Additionally, Finance Manager adopts Monefy's emphasis on simplicity, ensuring that users can easily navigate and comprehend their financial data at a glance.

MyMoney, recognized for its comprehensive financial insights and budget management, has inspired key features in Finance Manager. The Finance Manager app aims to provide users with a holistic understanding of their financial health, incorporating MyMoney's robust expense tracking functionalities. The proactive notification system in Finance Manager, alerting users when monthly expenses approach critical thresholds, is a direct reflection of MyMoney's impactful notification mechanisms.

Wallet: Budget Planner Tracker App, with its emphasis on budget planning and expense tracking, has influenced Finance Manager's approach to transaction categorization. Finance Manager incorporates the meticulous categorization of income and expenses, allowing users to allocate funds systematically and track their financial activities seamlessly.

Moreover, Finance Manager integrates the concept of monthly budget planning, allowing users to set financial goals and monitor their progress. This feature draws inspiration from Wallet, enriching the Finance Manager app with tools to help users stay on top of their financial targets.

The Finance Manager app is a synthesis of the best practices observed in Monefy, MyMoney, and Wallet. It combines the simplicity of design, comprehensive financial insights, and effective budget management found in these apps while introducing innovative features to enhance the user experience. Through this literature review, we gain insight into how the Finance Manager app seamlessly incorporates successful elements from its predecessors, creating a dynamic and user-centric financial management solution.

Objectives:

The Finance Manager app is crafted with clear and comprehensive objectives, aligning with the overarching goal of providing users with a powerful and user-friendly tool for managing their personal finances. The primary objectives of the app can be delineated into several key areas.

Firstly, the app aims to streamline the user onboarding process by implementing a captivating splash screen and a secure login mechanism. The inclusion of a signup page with essential fields such as name, email, password, and confirm password ensures a seamless and secure entry into the app.

Security and accessibility converge in the login page, where users are prompted to enter their email and password. The incorporation of captcha verification adds an additional layer of security, balancing the need for user-friendly access with robust protection against unauthorized access.

The Finance Manager app further aims to enhance user engagement and satisfaction by offering a diverse range of functionalities on the home page. Users can effortlessly calculate and manage their monthly transactions, choosing from predefined categories such as income (deposits, salary, savings) and expenses (bills, clothes, house, health, food, gifts). The flexibility to select the preferred month for expense and income entries, along with the provision to add custom categories, caters to individualized financial management needs.

A noteworthy objective of the Finance Manager app is to provide proactive financial alerts. Users receive notifications when their monthly expenses approach \$100 or fall below this threshold, promoting financial awareness and empowering users to make informed decisions.

The app's calculator feature serves the purpose of facilitating the seamless addition of income and expenses. This calculator not only adds a practical dimension to financial transactions but also contributes to the overall user convenience and efficiency.

In summary, the Finance Manager app is designed with a multifaceted set of objectives. From ensuring a secure and user-friendly onboarding experience to providing diverse financial functionalities and proactive alerts, the app strives to empower users with the tools and insights needed to take control of their financial well-being. Through these objectives, the Finance Manager app aspires to be a comprehensive and indispensable solution in the realm of personal finance management.

Methodology:

The development of the Finance Manager app was undertaken with a focus on leveraging industry-standard tools and technologies to ensure efficiency, reliability, and scalability. The choice of Java as the primary programming language and SQLite as the database management system in the Android Studio environment played a

critical role in shaping the app's functionality and performance. The methodology adopted for the development of the Finance Manager app can be outlined as follows:

1. **Choice of Programming Language:** Java, a versatile and widely used programming language, was selected as the primary language for app development. Its object-oriented nature, portability, and extensive community support made it an ideal choice for crafting a robust Android application.
2. **Android Studio as the Development Environment:** Android Studio, the official integrated development environment (IDE) for Android app development, was employed to harness its powerful features and tools. The IDE provides a rich set of resources, including a visual designer, code editor, and debugging tools, streamlining the development process.
3. **Database Management System:** SQLite, a lightweight and embedded relational database management system (RDBMS), was chosen to handle data storage within the app. SQLite is well-suited for mobile applications, offering simplicity, efficiency, and seamless integration with Android applications.

The splash screen in the Finance Manager mobile app serves as an engaging and visually appealing prelude to the user experience. Upon launching the app, users are greeted with a captivating splash screen that not only introduces the Finance Manager brand but also sets a positive and welcoming tone. This initial screen is carefully designed to create a sense of anticipation and excitement for users about to embark on their financial management journey.

The Finance Manager splash screen combines aesthetics with functionality, offering more than just a visually pleasing introduction. It acts as a loading screen, ensuring a seamless transition to the main application interface. This brief yet impactful moment is an opportunity to convey the app's identity and mission. The design elements, such as the logo and color scheme, are thoughtfully chosen to resonate with users and leave a lasting impression.

In essence, the splash screen in the Finance Manager app is more than just an entry point; it's a strategic element in crafting a positive and memorable user experience. Through this carefully curated introduction, users are subtly guided into the world of Finance Manager with a sense of excitement and confidence in the forthcoming financial management journey.



The login page in the Finance Manager app exemplifies a delicate balance between security and accessibility, ensuring that users can seamlessly access their financial data while safeguarding sensitive information. The inclusion of email and password fields constitutes the fundamental security layer, requiring users to provide unique credentials for account access.

To fortify this security framework, a captcha verification mechanism is integrated into the login process. Captcha serves as an additional layer of defense against automated bots and malicious activities. This not only prevents unauthorized access but also reinforces the app's commitment to user data protection.

While prioritizing security, the login page is designed with user accessibility in mind. The intuitive layout and clear instructions facilitate a user-friendly experience, ensuring that individuals of varying technological expertise can navigate the login process effortlessly. The incorporation of modern design principles aligns with accessibility standards, promoting inclusivity and ease of use.

In essence, the Finance Manager login page strikes a harmonious balance by prioritizing robust security measures without compromising user accessibility. This approach contributes to the app's credibility, instilling confidence in users that their financial information is both protected and easily accessible.

The Signup Page in the Finance Manager app serves as a pivotal component, streamlining the onboarding process for users by efficiently collecting essential information. This integral step

is designed to enhance user engagement, establish personalized accounts, and ensure the security of financial data.

The inclusion of fields such as name, email, password, and confirm password creates a comprehensive user profile. Gathering the user's name adds a personal touch to the app, fostering a sense of connection. The email becomes a unique identifier, facilitating communication and providing a secure means for account recovery.

Password creation, accompanied by a confirm password field, is a critical aspect of user account security. By enforcing the confirmation, the Signup Page minimizes the risk of input errors and ensures that users have accurately entered their chosen passwords. This two-step password verification process contributes to the overall integrity of user accounts.

The onboarding process is designed for efficiency and user convenience. Clear and concise instructions guide users through each step, promoting a seamless and intuitive experience. By keeping the required information to a minimum, the Signup Page strikes a balance between collecting essential data and reducing friction in the onboarding process.

The streamlined onboarding process is further complemented by responsive design elements, making the Signup Page accessible across various devices. This adaptability ensures that users can create accounts with ease, regardless of the device they are using, contributing to a positive onboarding experience.


The Signup Page in the Finance Manager app exemplifies a commitment to user-centric design and data security. By collecting essential information in a streamlined manner, the onboarding process becomes efficient, encouraging users to engage with the app effortlessly while instilling confidence in the security of their financial information.

Login Page

Email

Password

Login



☐ I'm not a robot

Sign Up

Create Account

Full Name

Email

Password

Confirm Password

Create Account

Already have an Account ?

Log in

Captcha verification in login page using Google APIs in the Finance Manager app adds an extra layer of security to the login process, enhancing the overall user experience. Captcha, short for "Completely Automated Public Turing test to tell Computers and Humans Apart," is a security mechanism designed to distinguish between human users and automated bots. Implementing Google's reCAPTCHA API ensures a robust defence against malicious activities while maintaining user-friendly access.

The purpose of captcha verification in the login page is to prevent unauthorized access and protect user accounts from potential threats like brute-force attacks and automated login attempts. Google's reCAPTCHA API offers an advanced and reliable solution for implementing this security measure.

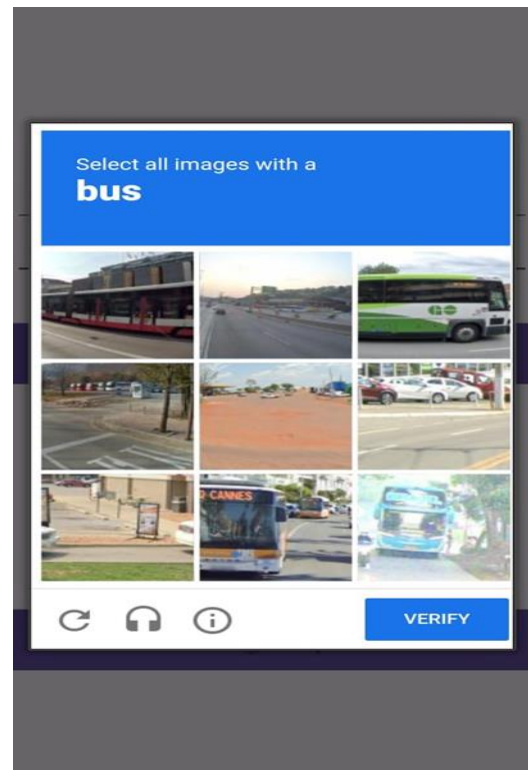
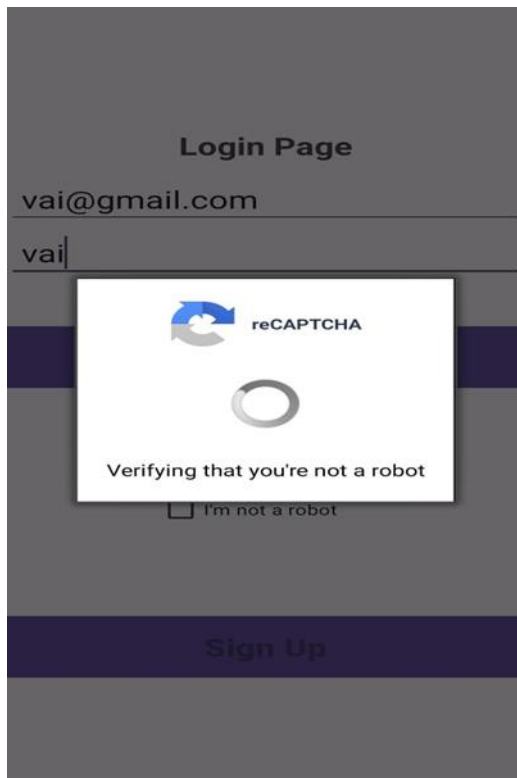
The captcha verification process involves presenting users with challenges such as image recognition, puzzle-solving, or other interactive tasks that are easy for humans but challenging for bots to complete. Google's sophisticated algorithms analyse user responses, instantly distinguishing between legitimate users and automated scripts attempting to breach the system.

In the Finance Manager app, users encounter the captcha verification step during the login process. After entering their email and password, users are prompted to complete the captcha challenge, ensuring that the login attempt is genuine. This step plays a crucial role in securing user accounts and maintaining the integrity of financial data stored within the app.

Google's reCAPTCHA API offers a seamless and non-intrusive user experience. The challenges are carefully designed to be user-friendly, minimizing friction during the login process. This ensures that genuine users can access their accounts with ease while deterring malicious entities from attempting unauthorized access.

Additionally, the Finance Manager app benefits from the continuous advancements and updates provided by Google's reCAPTCHA service. This ensures that the captcha verification remains effective against evolving cybersecurity threats, providing users with a reliable and up-to-date security solution.

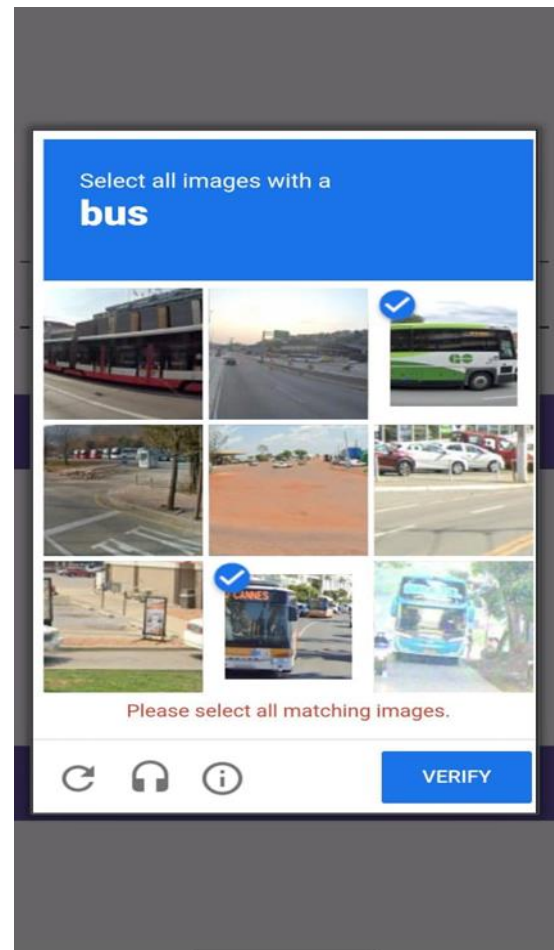
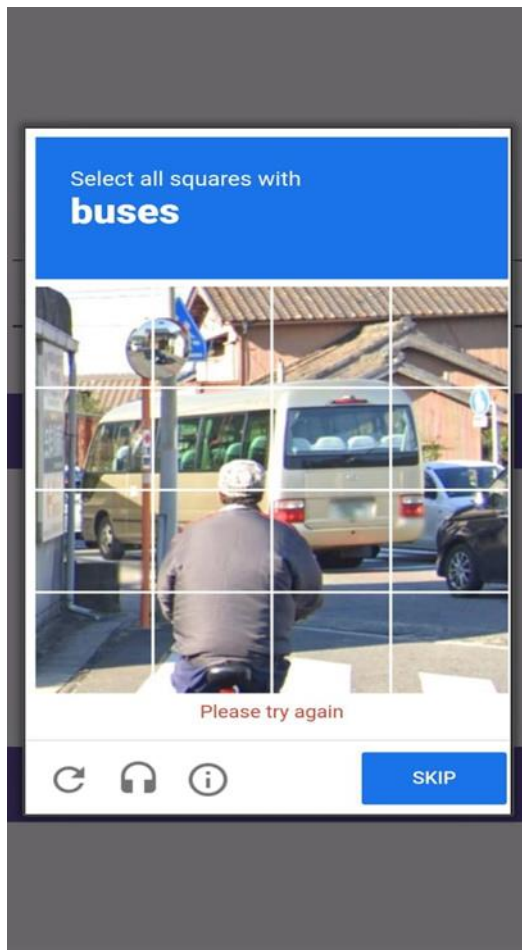
Implementing captcha verification using Google's reCAPTCHA API in the Finance Manager app is a strategic choice to balance security and accessibility. By incorporating this advanced security measure, the app not only safeguards user accounts and financial data but also fosters trust and confidence among users who can rely on the application for the secure management of their financial information.



If a user selects the wrong images during captcha verification, the app responds with a friendly prompt saying, "Please try again." This message reassures users that a simple mistake has occurred and invites them to make another attempt, minimizing frustration and maintaining a positive interaction.

Similarly, if a user neglects to select all the necessary images, the app provides a specific error message stating, "Please select all images." This guidance ensures that users understand the completeness requirement and prompts them to revisit their selections. It's a proactive measure to prevent users from moving forward with an incomplete captcha challenge, contributing to the security and reliability of the authentication process.

These user-friendly error messages are strategically designed to encourage users to rectify their actions and successfully complete the captcha verification. By providing clear instructions and feedback, the Finance Manager app aims to create a smooth and supportive user experience, ensuring that users can navigate the captcha process with ease and confidence. This attention to detail contributes to the overall accessibility and security objectives of the application.



The Home Page in the Finance Manager app serves as the central hub for users to navigate their financial insights, providing a comprehensive overview of expenses, savings, and transaction history. This intuitive interface empowers users to manage their finances effectively and gain valuable insights into their spending patterns.

Upon logging in, users are greeted by a visually appealing and user-friendly dashboard that consolidates all financial data. The Home Page prominently displays categorized lists of expenses and savings, allowing users to have a quick snapshot of their financial status. This feature is essential for users to make informed decisions about budgeting and managing their funds.

One noteworthy feature is the ability to select a specific month, enabling users to focus on individual periods for budgeting and financial planning. The dropdown menu provides a convenient way to navigate between months, offering users flexibility and control over the displayed data.

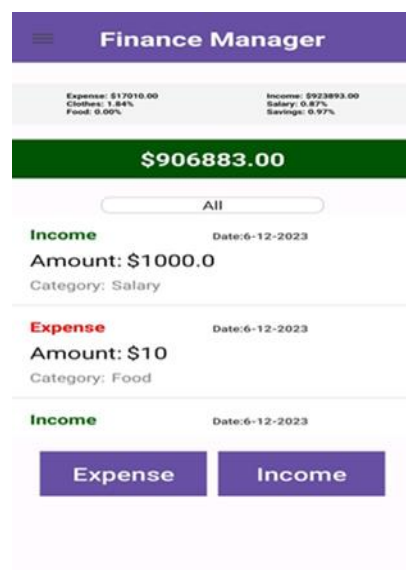
Each month's section on the Home Page offers a detailed breakdown of all transactions, including expenses and savings. By clicking on the preferred month in the dropdown, users

can access a comprehensive summary of their financial activities. This level of detail empowers users to scrutinize their spending habits, identify trends, and make data-driven decisions to enhance their financial well-being.

The interactive nature of the Home Page fosters user engagement and encourages regular monitoring of financial activities. Users can easily input new transactions, categorize them, and modify existing entries, ensuring that the financial data remains accurate and up-to-date.

Furthermore, the Home Page is designed with responsiveness in mind, ensuring that users can access their financial insights seamlessly across various devices. Whether users are on a desktop, tablet, or mobile device, the interface adapts to provide a consistent and enjoyable experience.

The Home Page of the Finance Manager app is a dynamic and user-centric interface that empowers users to navigate their financial insights effortlessly. The combination of categorized expense and savings lists, month-specific views, and interactive features makes it a powerful tool for users to gain control over their finances and make informed financial decisions.



The Finance Manager app features a streamlined and user-centric dashboard, offering users quick access to essential functionalities, including "My Account," "Settings," and "Logout." While the current implementation ensures that the "Logout" function is fully operational, it's important to note that the "My Account" and "Settings" sections are intentionally non-functional in the current version of the app.

The inclusion of these sections in the dashboard serves as a thoughtful and strategic design choice, allowing for future expansion and feature enhancements. By providing placeholders for "My Account" and "Settings," the app demonstrates foresight in planning for additional functionalities that may be introduced in subsequent updates. This approach aligns with a user-centered design philosophy, keeping the interface clean and uncluttered while setting the stage for future developments.

During this initial phase, the focus remains on perfecting the core functionalities, such as expense tracking, income calculation, and notification features. The deliberate decision to make "Logout" the sole functional element ensures that users can easily manage their session without confusion.

As the Finance Manager app evolves, users can anticipate exciting updates and enhancements to the "My Account" and "Settings" sections, offering a more comprehensive and personalized experience. This intentional design strategy reflects the app's commitment to adaptability and user satisfaction, providing a strong foundation for ongoing improvements.

The dashboard's logout functionality within the Finance Manager app is a crucial component that prioritizes user security and privacy. When a user decides to log out, it initiates a series of processes that contribute to a seamless and secure transition from their active session to a logged-out state.

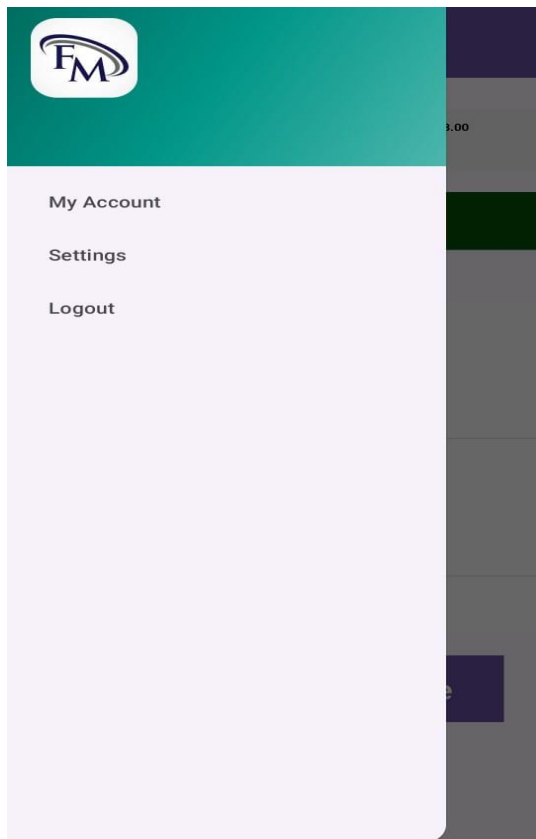
Upon clicking the logout button, the app triggers a backend process that effectively terminates the user's current session. This involves clearing any stored authentication tokens or session identifiers associated with the user, rendering them invalid for subsequent interactions. By revoking these credentials, the app ensures that unauthorized access to the user's financial data is prevented, safeguarding their sensitive information.

Simultaneously, the app intelligently redirects the user to the login page, reinforcing a user-friendly and intuitive navigation flow. This redirection not only aligns with standard security practices but also provides a clear and familiar path for users to initiate a new session. Users are presented with the familiar login interface, where they can securely input their credentials to access their financial data.

The incorporation of this logout mechanism significantly enhances the overall security posture of the Finance Manager app. Users can confidently end their sessions, knowing that their financial information is protected against unauthorized access. This feature is particularly crucial in scenarios where users access the app from shared devices or public spaces, adding an extra layer of security to their financial data.

Furthermore, the logout functionality contributes to a positive user experience by promoting a sense of control and transparency. Users appreciate the ability to easily conclude their sessions, fostering trust and confidence in the app's commitment to their privacy.

The logout functionality in the Finance Manager app is a pivotal element that seamlessly combines security and user experience. By terminating active sessions, revoking access credentials, and redirecting users to the login page, the app ensures a robust and user-friendly approach to managing user sessions and safeguarding their financial information.



The Finance Manager app is meticulously crafted to serve as a comprehensive solution for users seeking control and insights into their financial activities. At its core, the app's efficacy lies in its sophisticated categorization system, a feature that distinguishes it as a robust financial management tool.

Upon accessing the app, users are greeted with a meticulously designed interface that revolves around the central idea of categorizing financial activities into two primary domains: income and expenses. This bifurcation allows users to gain a nuanced understanding of their financial transactions, fostering clarity and precision in financial management.

In the realm of income, the app presents users with a set of well-defined options. These include deposits, salary, and savings. By offering these distinct income categories, the app acknowledges the multifaceted nature of earning patterns. Users can effortlessly assign their income sources to these predefined categories, laying the foundation for a structured and insightful financial overview.

Conversely, the expense side of the categorization spectrum is equally comprehensive. Categories encompass bills, clothes, house-related expenses, health-related expenditures, food costs, and gifts. Each category is carefully chosen to encompass common aspects of daily spending, ensuring that users can easily allocate their expenses to specific and relatable categories.

This intricate categorization system serves a dual purpose. Firstly, it simplifies the process of recording transactions, allowing users to efficiently log their financial activities under

appropriate headings. Secondly, it sets the stage for in-depth financial analysis. The detailed breakdown of income and expenses empowers users to track spending patterns, identify areas for potential savings, and make informed financial decisions.

Moreover, the categorization system provides a foundation for creating detailed reports and summaries. Users can generate insightful reports that highlight the distribution of income and expenses across various categories, offering a comprehensive snapshot of their financial landscape.

In essence, the Finance Manager app's commitment to categorization goes beyond mere organizational convenience. It emerges as a strategic tool for users to navigate the complexities of personal finance, promoting financial literacy, and empowering users to make informed decisions. The detailed categorization becomes a cornerstone for financial analysis, helping users dissect their spending and earning patterns with precision and clarity.

The image displays two mobile application interface mockups side-by-side. The left mockup is titled 'Expenses' and features a pink header bar with the text 'Please enter Amount.' Below this is a grid of category buttons: Bills, Clothes, House, Health, Food, and Gift. At the bottom, there is a large purple 'Add' button and a date selector showing 'December'. The right mockup is titled 'INCOME' and features a pink header bar with the text 'Amount' and a 'Back' button. Below this is a numeric keypad with buttons for digits 0-9, a decimal point, and a plus/minus sign. At the bottom, there is a large purple button labeled 'Chose Category'.

The inclusion of a calculator within the Finance Manager app represents a pivotal feature designed to enhance user convenience and streamline the process of inputting income and expenses. This multifunctional tool is seamlessly integrated into the app's interface, providing users with a dynamic and user-friendly solution for managing their financial transactions.

The calculator serves as a versatile instrument for users, allowing them to input precise numerical values associated with both income and expenses. By incorporating this feature, the app eliminates the need for users to switch between different applications or devices when calculating the exact figures they wish to log.

When logging income, users can leverage the calculator to compute amounts related to deposits, salary, or savings accurately. This ensures that users can record their income sources with pinpoint precision, fostering a more accurate representation of their financial inflows.

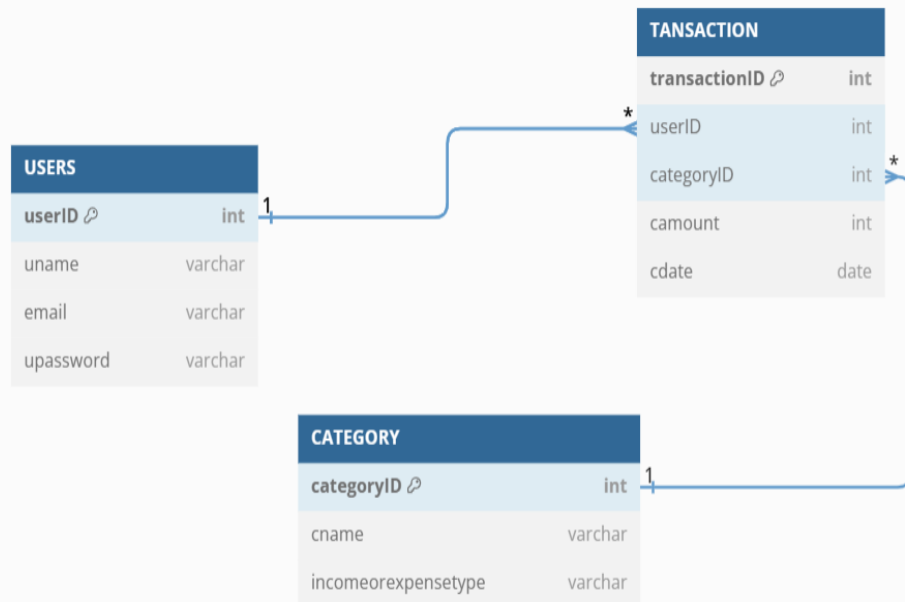
Similarly, for expenses, the calculator proves invaluable. Users can effortlessly perform calculations related to bills, clothing expenses, house-related costs, health expenditures, food, and gifts. This dynamic functionality eradicates the potential for errors associated with manual calculations, enabling users to maintain a meticulous and error-free record of their spending.

The calculator feature aligns seamlessly with the app's overarching objective of simplifying financial management. Its user-friendly interface and intuitive design make it accessible to individuals with varying levels of mathematical proficiency. Users can perform basic arithmetic operations, such as addition and subtraction, facilitating the calculation of both individual transactions and cumulative financial data.

Beyond its practical utility, the calculator contributes to the overall efficiency of the Finance Manager app. It promotes a fluid and uninterrupted user experience, eliminating unnecessary steps and potential points of friction in the process of entering financial data.

In essence, the implementation of a calculator within the Finance Manager app underscores a commitment to user-centric design and functionality. This tool empowers users to engage with their financial data in a more dynamic and efficient manner, further solidifying the app's position as a comprehensive and user-friendly solution for personal financial management.

Schema:



Conclusion:

In the ever-evolving landscape of personal finance management, the Finance Manager app emerges as a trailblazer, seamlessly blending user-friendly interfaces with robust functionalities. This journey into the app's intricate details, from the captivating splash screen to the nuanced features of monthly transactions, unveils the Finance Manager app not merely as a tool but as a holistic solution empowering users to take command of their financial well-being.

In essence, the Finance Manager app transcends the conventional boundaries of financial management. It becomes a trusted companion, guiding users toward financial stability and empowering them to make informed decisions. As we conclude this exploration, the Finance Manager app stands not just as a technological achievement but as a testament to the potential of digital tools in transforming personal finance management. In a world where financial literacy is paramount, the Finance Manager app emerges as a beacon, illuminating the path to financial wellness.

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