

Muhammad Usama Mughal

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Professional Summary

Dedicated **Android Developer** with extensive experience in building robust, scalable mobile applications using **Kotlin** and **Java**. Expert in implementing **Clean Architecture (MVVM)** and modern tech stacks to deliver high-performance solutions for the fintech and service sectors. Proven track record in developing complex business management systems software and financial tracking tools with a focus on **local security protocols, cloud synchronization, and licensing logic**. Dedicated to software integrity, utilizing anti-tamper mechanisms and clean, maintainable code to solve real-world problems & to create maintainable and high-performance software.

Career Objective

Previously trained as an IT Support Engineer at Pearl Continental Hotel Rawalpindi, with strong skills in troubleshooting, server monitoring, and IT operations. Passionate about creating modern, user-friendly mobile and desktop level applications while continuously improving technical expertise in full-stack software development.

Software & App Development Projects

Al-Muqet Milk / Business Management Ecosystem

Lead Developer | Android Studio Narwhal Feature Drop | 2025.1.2 Patch 2, Kotlin/Java

- **Automated Ledger Systems:** Engineered a dynamic billing engine within the **Android Studio** environment that generates professional PDF invoices and manages complex customer ledgers automatically.
- **Resilient Backup:** Integrated a hybrid synchronization model using local storage and **Firebase** for cloud-based data redundancy, utilizing **Logcat** and **Firebase Debug View** to ensure data integrity during sync.

- **Proprietary Security:** Leveraged **Android Studio's** advanced debugging and obfuscation tools to develop a robust, offline-capable License Management System using **Time-Block MD5 Hashing**, preventing unauthorized redistribution and data-clearing bypasses.
- **WhatsApp Integration:** Built a direct communication bridge for sending digital bills and notifications to customers via WhatsApp.

Aequus Vault / Income/Expense Tracker

Lead Developer | Android Studio, Kotlin/Java

Technical Core & Logic Implementation

- **Financial Data Aggregation Engine:** Engineered real-time logic to process and synchronize core financial metrics, including **Total Balance**, **Monthly Expenditure**, and **Consolidated Savings** using state-driven updates in Jetpack Compose.
- **Dynamic Progress Tracking:** Developed a mathematical tracking system for "Savings Goals" that calculates real-time percentage completion and visualizes milestones based on dynamic user input and historical data.
- **Expression Chaining Math Engine:** Architected a custom "Quick-Math" terminal supporting complex multi-step equations (e.g., $\$3+2+2-4\$$) via intermediate variable management, ensuring mathematical accuracy during long-string operations.
- **Smart Transaction Categorization:** Designed a filtering algorithm to automatically sort high-volume transaction data into **Income** and **Expense** streams, providing users with granular visibility into cash flow.

Architectural & UI Achievements

- **Advanced UI Design (Clean Architecture):** Leveraged Material 3 and Jetpack Compose to build a high-contrast visual hierarchy, utilizing strategic color coding to differentiate financial statuses for instant data recognition.
- **Currency & Exchange Module:** Developed a dedicated exchange interface utilizing mathematical ratio logic for currency conversion, demonstrating proficiency in handling complex numeric computations and external data integration.
- **Data Reliability:** Ensured high data integrity through local persistence logic (Room Database) and manual cloud-backup routines to protect sensitive financial records against data loss.

Technical Skills

- **Languages:** Kotlin, Java, Python (Tkinter, Kivy), SQL.

- **Android Development: Jetpack Compose** (Declarative UI), XML Layouts, **Material Design 3**, Coroutines, Flow, WorkManager.
- **Architecture & Patterns: Clean Architecture, MVVM**, Repository Pattern, Dependency Injection (Hilt/Koin).
- **UI/UX Design:** User-Centric Design, Responsive Layouts, **Lottie Animations**, Dark Mode Implementation, Wireframing & Prototyping (Figma), Adaptive UI for various screen sizes.
- **Security & Logic:** MD5 Hashing, Custom Licensing Managers, Anti-Clock Tamper Logic, Time-Block Validation, ProGuard/R8 Obfuscation.
- **Databases & Cloud: Room DB**, SQLite, Firebase (Realtime Database, Auth, Analytics), Google Cloud Console.
- **Tools: Android Studio (K2 Compiler)**, VS Code, Git/GitHub, Figma, Postman (API Testing).

Soft Skills

- **Problem Solving & Analytical Thinking:** Ability to break down complex business requirements into technical logic (e.g., developing custom security hashing).
- **AI-Assisted Development:** Expert at leveraging AI tools to accelerate coding workflows, optimize performance, and troubleshoot complex bugs.
- **Team Collaboration & Leadership:** Experienced in working within project environments and managing direct communication with business stakeholders.
- **Communication & Client Relations:** Proven ability to translate technical concepts for non-technical users and provide high-quality customer support.
- **Adaptability & Time Management:** Skilled at managing multiple project timelines (like Al-Muheet Milk & Aequs Vault) while maintaining code quality.

Education

Intermediate in Computer Science (ICS)

Islamabad Model Postgraduate College of Commerce, H8-4, Islamabad

Matriculation (Science)

BUDS School System (English Medium)

Certifications

- 3-Month IT Training Certificate – Pearl Continental Hotel, Rawalpindi
- 3-Year Experience Letter – Hashtag Media (Video Editing & Research)

Personal Interests

- **Advanced Security:** Exploring cryptographic implementations in mobile environments.
- **Automotive Tech:** Following the tech stacks of BMW and Tesla.
- **Fitness:** Active in Football and Gym activities.

Languages

English – Fluent

Urdu – Native