



Sandooq El-Amara

Enterprise Residential Community & Homeowners Association Treasury Management System

The definitive operational manual and architectural guide for Building Treasurers, Homeowners Association (HOA) Boards, Property Managers, and Residents. Covering the Triple-Treasury framework, automated double-entry ledger, WhatsApp digital receipts, "Uncle Amin" AI Advisor, and the 7 certified banking-grade reports.



ACCOUNTING STANDARD

Triple-Treasury (Cash / Bank / E-Wallet)



AI ENGINE CORE

Uncle Amin (Gemini 2.5 Flash Voice & Audit Core)



SYSTEM RELIABILITY

Offline-First Room DB with Cloud Firestore Sync



COLLECTIONS & RECEIPTS

1-Tap Direct WhatsApp Dispatch (No Contacts Needed)



REPORTING ENGINE

7 Modular Certified Banking-Grade Statement Hub



AUDIT & INTEGRITY

Immutable Delta Activity Audit Trail (Who/When/Device)

Sandooq El-Amara Enterprise Edition

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Target Audience: Property Managers, Treasurers, HOA Committees, Owners, and Tenants.

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This operational guide is structured into 16 modular chapters covering every facet of property management, paired 1:1 with exact physical page references for rapid audit and discovery:

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Document Architecture Standard

Each chapter represents a self-contained operational unit featuring architectural foundations, step-by-step procedural workflows, structured schema tables, and field security advisories.



Sandooq El-Amara is a purpose-built, cloud-synchronized property management and financial transparency ecosystem designed specifically for residential buildings, commercial compounds, and Homeowners Associations (HOA). It replaces manual paper ledgers with a rigorous, auditable double-entry accounting engine.

1.1 Architectural Pillars

- **Offline-First Durability (Room SQLite Engine):** The core database resides locally on the user's device. Treasurers can register collections or maintenance expenses in basements, elevators, or parking garages without cellular reception, synchronizing with Firebase Cloud Firestore seamlessly upon reconnection.
- **The Triple-Treasury Framework:** Every financial transaction is explicitly tied to a tangible liquidity vault: Physical Cash 🏠, Bank/InstaPay Account 🏦, or Mobile E-Wallet 📱. This eliminates the discrepancy between theoretical paper balances and actual liquid funds.
- **Uncle Amin AI Financial Co-Pilot:** Powered by Google's Gemini 2.5 Flash model, Uncle Amin serves as a 24/7 AI auditor that analyzes transactions in real time, warns against liquidity depletion, and transcribes spoken voice dictation in colloquial dialects.
- **Uncompromising Transparency & Legal Compliance:** Automatic issuance of timestamped, tamper-resistant PDF receipts with SHA-256 verification hashes, ensuring complete legal and social trust between neighbors.



The Zero Silent Mutation Security Rule

Neither the Uncle Amin AI engine nor any automated background routine is permitted to mutate or write data directly to the database. Every action, draft transaction, and Excel import must pass through an explicit human review and confirmation dialog before persisting.



Onboarding is streamlined to transition a newly installed building from zero to fully operational within less than two minutes.

2.1 Language & Bi-Directional UI Preview

- **Language Selection Modal (🌐):** Full RTL Arabic or LTR English with instant live layout preview. Choices are only committed after pressing "Continue" and can be updated anytime in Settings.
- **Uncle Amin Animated Voice Tour:** 5 animated scenes simulating real touch navigation (👉) and bilingual voice commentary covering building setup, triple treasuries, receipts, arrears radar, and 7-day free trial.

2.2 High-Speed Setup Wizard Steps

Step	Data Gathered & System Action	Configuration Options
1. Building Identity	Building Name, Head Treasurer Name, Official WhatsApp contact.	Auto-populated from Google Account with custom override.
2. Unit Topology	Number of floors and units per floor.	Instant algorithmic unit generation.
3. Numbering Scheme	Unit naming convention matching the physical building.	Sequential (1, 2, 3), Floor-Code (101, 102), Directional.
4. Opening Balances	Liquid capital available at migration time.	Start from Scratch (0.00) or split across Cash, Bank & Wallet.
5. Monthly Tariff	Baseline monthly subscription fee per unit.	Uniform tariff or customized unit-level pricing.



The core accounting engine solves the universal property management dilemma: *"The balance sheet claims we have \$1,500, but in which pocket does this money physically reside?"*



Active Liquidity Breakdown (Home Dashboard)

VIP Enterprise License ★

Total Fund Liquidity: 24,850.00 EGP

 **Cash on Hand**
8,450 EGP

 **Bank / InstaPay**
14,200 EGP

 **Mobile E-Wallets**
2,200 EGP

3.1 Inter-Treasury Transfers ()

Withdrawing cash from the bank ATM to replenish the physical petty cash lockbox is an internal balance transfer:

1

Triggering the Transfer Modal

Click «Transfer Liquidity  » directly adjacent to the main balance card on the dashboard.

2

Selecting Routing Channels

Designate the Source Vault (Bank Account) and the Destination Vault (Cash), specifying amount and note.

3

Atomic Execution

Deducts from Vault A and credits Vault B in a single transaction while keeping total liquidity intact.

3.2 Privacy Masking & Month Rollover ()

- **Privacy Shield** (): Masks financial values with bullets (•••••) during public meetings.
- **Start New Month** (): Automatically rolls closing balances into new opening reserves without data loss.



The «**Apartments**  » view provides a complete 360-degree ledger for every physical space in the building, encompassing owners, tenants, custom rates, and real-time default monitoring.

4.1 The Real-Time Arrears Radar (Default Detection)

Status Indicator	Accounting Definition	Prescribed System Action
Fully Paid 	Current month fee and all historical debts are completely settled (Balance = 0).	Issue digital appreciation receipt.
Current Month Due 	Only the ongoing month's subscription is outstanding (no historical arrears).	Gentle WhatsApp payment reminder with digital link.
Critical Arrears 	Two or more months of unpaid subscriptions plus legacy project debts.	Consolidated account statement with legal escalation notice.

4.2 1–Tap Comprehensive Dues Settlement (Full Settlement)

When a defaulting resident with multiple delinquent months submits a lump-sum payment:

- 1 Automated Debt Aggregation**
Click «Full Settlement  » in the unit card. The dialog tabulates all outstanding months, legacy debts, and capital project shares.
- 2 Intelligent FIFO Liquidation**
If paid in full, all arrears are cleared in a single click. For partial payments, the FIFO algorithm liquidates oldest debts first.
- 3 Certified Consolidated PDF Receipt**
Generates an executive statement listing every covered month, the liquidated debt, and a certified clearance seal.



Paper receipts are fragile, easily lost, and lead to disputes. The **Digital Receipts Engine** replaces paper with tamper-resistant, verifiable electronic receipts dispatched instantly over WhatsApp.

5.11–Click WhatsApp Direct Dispatch

- **No Contact Saving Required:** Leveraging deep-link URI schemes, the app opens a direct chat with the resident without cluttering the treasurer's phone address book.
- **Pre-composed Courteous Notice:** Automatically crafts an executive message with the resident's name, apartment number, amount in numerals and text, covered months, receiving vault, and balance status.
- **Multi-Format Sharing:** Share high-resolution receipt images or certified PDF documents with official HOA stamps.



Official Digital Collection Receipt Anatomy

Verified & Cleared ✓

Property: Al-Safwa Executive Tower — Certified HOA Council



Receipt Ref: REC-2026-10-0482 | **Date:** October 24, 2026



Received From: Mr. Ahmed Abdel-Rahman (Apt. 402, 4th Floor)



Amount: 600.00 EGP (Six Hundred Egyptian Pounds Only)



Description: Monthly Maintenance & Janitorial Dues for (Oct 2026 + Nov 2026)



Payment Channel: InstaPay Instant Wire → Bank Treasury Account



Financial Standing: Zero outstanding balance (Account fully paid through end of Nov 2026).



5–Second Instant Undo Safety Guard

If a collection is recorded under the wrong unit, an immediate green notification snackbar appears at the bottom for 5 seconds with an «Undo » action, reversing the transaction and restoring vault balances instantly.



Every single cent departing the fund must be backed by an auditable reason. The expense module offers deep category tagging and multi-photo cloud invoice storage.

6.1 Standard Expense Taxonomy & Liquidity Routing

Expense Category	Operational Scope & Examples	Default Vault
Elevator Maintenance 	Monthly technician inspections, lubrication, cable adjustments, and spare parts.	Cash or Bank Wire
Shared Utilities 	Common hallway lighting bills, main water pump electricity, and commercial water meters.	Bank / InstaPay
Wages & Security 	Monthly porter stipend, concierge salaries, and security gatekeeper tips.	Physical Cash
Cleaning & Consumables 	Detergents, floor disinfectants, trash bags, and LED stairwell bulbs.	Physical Cash (Petty Cash)
Plumbing & Drainage 	Rooftop piping repairs, central drainage clearing, and water pump mechanical valves.	Physical Cash
Administrative & Legal 	A4 notice printing, meeting logistics, gate lock repairs, and emergency incidentals.	Cash or E-Wallet

6.2 Multi-Photo Invoice Cloud Archival (Up to 5 Photos)

- **Up to 5 Photos per Expense:** Capture physical receipts, replaced parts, and proof of work.
- **Cloud Storage & Compression:** Automatic image compression ensures crisp details while conserving mobile data, uploaded securely to Google Cloud with full-screen inspection from the ledger.



Petty Cash Custody (العهد المالي) is prone to accounting errors when treasurers hand lump sums to building caretakers without tracking incremental receipts. The Custody module models the complete lifecycle from issuance to final reconciliation.

7.1 Three-Phase Custody Workflow

1

Phase 1: Custody Issuance

From Operations → Custody, issue cash (e.g., 1,500 EGP) to the caretaker.

Accounting Impact: Deducted from the liquid Cash vault and booked under "Active Custody Assets". It is not an expense yet.

2

Phase 2: Incremental Expenditure Logging

As the caretaker buys supplies (bulbs, cleaning agents), bills are logged against the active custody with photo receipts, automatically reducing the caretaker's balance.

3

Phase 3: Final Reconciliation & Closing

When the caretaker presents 1,350 EGP in receipts and returns 150 EGP cash:

- The system registers 1,350 EGP as official building expenses.
- The returned 150 EGP is credited back to the Cash vault, closing the custody with zero variance.



WhatsApp Custody Statement Dispatch

Export detailed custody liquidation statements directly to WhatsApp to provide full transparency to the caretaker and committee members.



Capital works represent non-recurring, large-scale investments that exceed regular monthly dues: **(Elevator overhauls, exterior facade painting, rooftop waterproofing insulation, or backup generator installation).**

8.1 Segregated Project Accounting Principles

- **Dedicated Capital Sub-Accounts:** Project capital is segregated from monthly operational dues to ensure ongoing cleaning and electricity bills are never starved by construction payments.
- **Flexible Cost Apportionment Algorithms:**
 - *Equal Apportionment:* Dividing project cost equally across all units (e.g., 30,000 EGP / 15 apartments = 2,000 EGP per unit).
 - *Area (Square Meter) Ratio:* Units pay proportional to deed area (e.g., a 200 m² penthouse contributes double a 100 m² apartment).
 - *Selective Unit Exclusion:* 1-tap exclusion for ground-floor shops or units exempt from elevator renovation projects.
- **Installment Schedules & Dedicated Receipts:** Apportioned costs can be scheduled over multiple monthly installments, with dedicated project collection tracking and separate WhatsApp payment receipts.



Independent Budget Monitoring

Each project maintains an autonomous ledger tracking planned budget, actual collections, and contractor disbursements without distorting general fund balances.



The «**Smart Tools**  » hub contains specialized calculators designed to eliminate neighbor disputes and automate complex administrative workflows.

9.1 Fair–Share Utility Bill Apportionment (Calculator)

1

Bill Input

Enter total invoice amount and due date for communal water or shared electricity bills.

2

Distribution Logic Selection

Select distribution method: Equal split, Resident headcount, or Square meter area ratio.

3

1–Tap Unit Exclusions

Exclude closed/vacant units or commercial spaces that do not consume water with a single tap.

4

WhatsApp Schedule Dispatch

Generates an exact breakdown per unit with an instant share button for the building community group.

9.2 Official A4 Legal Notice & Circular Generator ()

Produces formatted, printable executive circulars for lobby notice boards: (General Assembly invitations, advance maintenance alerts, interior renovation permits, and community noise guidelines).



Full bi-directional Microsoft Excel (.xlsx) support enables frictionless data migration and robust offline disaster recovery backups.

10.1 The Unified 3–Sheet Excel Workbook

- **Sheet 1 (Units & Resident Master):** Unit codes, resident names, mobile numbers, monthly subscription fees, and opening arrears balances.
- **Sheet 2 (Historical Expenses):** Date, amount, expense category, notes, and funding treasury vault.
- **Sheet 3 (General Revenues):** Telecommunication tower rooftop leases, advertising panels, and commercial store rentals.

10.2 AI Column Mapping (Gemini 2.5 Flash)

The Gemini AI engine analyzes cell contents automatically, distinguishing mobile numbers from apartment numbers and mapping legacy columns reliably with an interactive review screen.



The 5–Layer Import Shield & Instant Snapshot Undo

Before writing any row from an imported Excel sheet to the database, the system captures an automated pre-import database snapshot. If an accidental file upload occurs, a prominent red "Undo Import & Restore Snapshot 🔄" button restores the database instantly to its exact pre-upload state.



Uncle Amin (عم أمين) is an embedded generative AI financial auditor powered by Google's Gemini 2.5 Flash, equipped with natural dialectical voice comprehension.

11.1 Hands-Free Smart Voice Dictation ()

1

Trigger Listening Mode

Tap the «Voice  » button in the Quick Actions dock. A real-time waveform animates with your voice.

2

Live Speech Transcription

Every spoken word appears on screen in real time to verify acoustic capture accuracy.

3

Natural Language Examples

- Collection: *"Apt 5 paid 300 EGP via Vodafone Cash for October"* or *"Ahmed Apt 2 paid 500 EGP via InstaPay"*.
- Expense: *"Spent 150 EGP cash for rooftop plumbing repair"* or *"Stairway electricity was 420 EGP paid from bank"*.

4

Human Verification & Approval

Pre-populates the official collection or expense modal for review. Nothing is saved without explicit human approval.

11.2 Real-Time Advisory Insights & Liquidity Warnings

Uncle Amin continuously monitors reserves and surfaces executive advisory cards when high expenses threaten liquidity or repeated repairs indicate contractor inefficiencies.



The application includes a comprehensive **7-Report Financial Hub** engineered to banking-grade typography standards, featuring management seals, digital signatures, and QR authentication.

Report Title	Accounting Scope & Analytical Data	Primary Audience
1. Monthly Income & Expense 	Cash flow breakdown: Opening balance, collections by vault, itemized expenses, surplus/deficit, closing reserves.	Owners & WhatsApp Broadcast.
2. Payment Status & Arrears 	Unit-by-unit grid displaying collection dates, settled periods, delinquent months, and building collection %.	Lobby Board & Committee.
3. Treasury & Liquidity Audit 	Account balancing statement verifying individual vault balances (Bank, Cash, Wallets) and inter-vault transfers.	Auditors & Head Treasurer.
4. Caretaker Custody & Cash 	Detailed ledger of funds issued to porters, approved invoice expenses, and returned residual cash.	Treasurer & Caretaker.
5. Capital Projects Ledger	Independent budget statement for capital works (elevators, facades) showing cost, collections, and progress.	HOA General Assembly.
6. Annual Balance Sheet	Full 12-month accounting analysis displaying seasonal expense curves, collection trends, and reserve growth.	Annual General Assembly.
7. Technicians & Service Log 	Official directory of certified technicians, visit logs, contract expiration dates, and warranty certificates.	Emergency Committee.

12.1 Itemized Custom Date-Range Report (v199)

Enables generating statements for custom fiscal intervals with targeted category filtering (e.g., only electricity or wallet collections) formatted as certified PDF files ready for distribution.



The system extends beyond the treasurer through **Resident Mode**, providing building residents with transparent, read-only access and interactive community features:

13.1 Frictionless Token-Based Linking

The treasurer shares an encrypted unit token via WhatsApp. Upon downloading the app and tapping «  *Paste Unit Token from WhatsApp*», the resident is securely linked to their apartment instantly without passwords.

13.2 Resident Mode Capabilities

- **Personal Financial Transparency:** Residents view their live balance, payment history, and download receipts (Read-Only access without modification rights).
- **Digital Building Pinboard (Smart Notes ):** Accessing official announcements, pest control schedules, and water tank sanitation notices.
- **Democratic Community Polls ():** Participating in building votes (e.g., lobby repaint color, security gate hours) with a verified one-vote-per-unit rule and transparent results.
- **Maintenance Incident Reporting:** Submitting repair tickets (hallway bulb out, plumbing leak) with attached photos and real-time repair status tracking.



Building Social Trust

Resident Mode eliminates suspicion by granting instant access to verified receipts and certified financial statements at any hour.



Built to enterprise financial standards, the system incorporates strict access controls, cryptographic audit logging, and global currency localization:

14.1 Immutable Activity Audit Trail

Every modification within the system is permanently logged in a secure database table that cannot be edited or erased:

- **User Identity:** Authenticated account ID and role executing the transaction.
- **Precise Timestamp:** Recorded to the exact second.
- **Delta Difference:** Original record state versus new mutated state.
- **Device Telemetry:** Hardware model and operating system version.

14.2 Global Multi-Currency Localization (\$ ¥)

Supports full currency configuration: (EGP, SAR, AED, KWD, OMR, BHD, USD, EUR) with automatic number-to-words spelling rules in both Arabic and English.

14.3 Android Home Screen Live Widgets (📱)

Compact home screen widgets display real-time fund liquidity and current month collection progress without needing to open the app.



Four real-world operational scenarios demonstrating best practices:

Scenario A: Migrating from Legacy Paper Ledgers

Case: A 16-unit building with 6,400 EGP in physical cash and legacy debts on two units (Apt 3 owes 800 EGP, Apt 9 owes 1,200 EGP).

Resolution: Complete Setup Wizard with 6,400 EGP in Cash Vault  → Enter 800 EGP on Apt 3 opening debt → Enter 1,200 EGP on Apt 9 opening debt.

Result: Active liquidity accurately reflects 6,400 EGP, and Arrears Radar automatically demands legacy balances on their next receipt.

Scenario B: Tenant Turnover & Lease Handover

Case: Tenant in Apt 104 is moving out and replaced by a new resident.

Resolution: Perform "Full Settlement" with departing tenant and issue clearance receipt → Update resident name and mobile number on Apt 104 profile → Dispatch unit linking token to new resident via WhatsApp.

Scenario C: Elevator Modernization Project

Case: Elevator modernization contract costing 24,000 EGP split equally across 12 apartments (2,000 EGP each).

Resolution: Create Special Project  with 24,000 EGP budget and equal split → System creates 2,000 EGP item per unit → Payments credit dedicated project reserve with special receipts.

Scenario D: Emergency Weekend Custody Replenishment

Case: Water pipe burst on a weekend; treasurer issues 800 EGP emergency cash to caretaker.

Resolution: Issue 800 EGP cash custody → Caretaker spends 680 EGP with receipts and returns 120 EGP → Log bills and close custody, crediting 120 EGP back to Cash.

Answers to frequently encountered operational inquiries:

Q1: Does the application operate in locations without Internet access?

A: Yes, 100%. Built on an Offline-First Room DB architecture, all entries are stored locally on the device and synchronize seamlessly with the cloud once network connectivity is re-established.

Q2: What happens if a treasurer loses or replaces their smartphone?

A: Data remains completely safe on Google Cloud. Installing the app on a replacement device and signing in with the registered Google account restores all building records, transactions, and invoice photos within seconds.

Q3: Can multiple administrators manage the same property simultaneously?

A: Yes. The platform supports co-treasurers and supervisory board accounts with role-based permissions, logging all user modifications in the Immutable Audit Trail.

Q4: Can residents accidentally modify or delete building accounting records?

A: Absolutely not. Resident accounts operate under strict Read-Only security policies. Residents can only view their own ledger, download receipts, and participate in community polls.

Q5: How can users receive technical support or onboarding guidance?

A: Direct WhatsApp support is integrated into the app (Profile → Contact Support 📞), complemented by 24/7 AI assistance from Uncle Amin.



Continuous Upgrades & Knowledge Sync

The platform receives regular updates with enhanced auditing tools, automatically synced with Uncle Amin's knowledge base.