Good Turn Hostel — Hostel Management Platform

Prepared for: Good Turn Hostel **Prepared by:** Thembo Allan **Date:** September 19, 2025

1) Executive Summary

We propose a modern Hostel Management Platform tailored to Good Turn Hostel's operations. The system digitizes student reporting each term, captures bio & guardian details (including simple medical profile), enforces term-based registration after payment, and integrates mobile money and bank payments. The implementation requires a target of **UGX 3,500,000** with a 6-week delivery plan and optional ongoing maintenance.

2) Objectives

- Replace paper-based reporting with a secure web system.
- Allow students/guardians to **register for a term only after payment** is confirmed.
- Support payments via **mobile number (MoMo)** and **bank/aggregator**.
- Provide receipts, statements, and clear reports (occupancy, arrears, revenue).
- Improve communication with SMS/email notifications.

3) Scope & Key Modules

1. **Student Profiles**

   - Bio data, photo, simple medical info, emergency contacts.
   - Parent/guardian records (multiple guardians supported).

2. **Term Management & Reporting**

   - Define terms (e.g., Term I/II/III) with open/close dates & fees.
   - Student **term registration** flows (new and returning).
   - "Report on arrival" checklist; attach receipts & notes.

3. **Payments & Receipts**

   - **Mobile Money** (MTN/Airtel) via collections; initiate/verify by phone number.
   - **Bank/Payment Aggregator** option (e.g., Flutterwave/Pesapal/Equity/…); card/bank transfer.
   - Auto-reconciliation, instant receipt generation, downloadable PDF.
   - Arrears tracking, penalties (optional), refunds workflow (manual approval).

4. **Room/Bed & Occupancy (Basic)**

   - Rooms, beds, occupancy status; quick assign/unassign.

5. **Dashboards & Reports**

   - Occupancy overview, payments today/this term, pending registrations.

   ○ Exportable CSV/PDF: student lists, arrears, revenue summaries.

6. **Notifications**

   ○ SMS/email alerts for successful payments, registration status, fee reminders.

7. **Self-Service Portal (Students/Guardians)**

   ○ View invoices, pay dues, download receipts, see room assignment and term status.

8. **Admin & Security**

   ○ Roles: Admin, Warden/Clerk, Accountant (extendable).
   ○ Audit logs for key actions; data export & encrypted backups.

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4) Deliverables

- Production-ready web application + Admin dashboard.
- Integrated payments (1 MoMo provider + 1 bank/aggregator in scope).
- Reporting pack (PDF/CSV exports).
- Deployment (cloud) with SSL, domain wiring, and nightly backups.
- Technical handover: source code repo, environment docs, API docs, admin manual.
- Training: 2 sessions (admin).

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5) Technology Stack

- **Frontend:** React + Next.js, Tailwind CSS.
- **Backend:** Node.js (Express/NestJS) + Prisma ORM.
- **Database:** MySQL (managed cloud DB).
- **Integrations:** Mobile Money Collections (MTN/Airtel) + one bank/aggregator (e.g., Flutterwave/Pesapal).
- **Hosting:** Vercel/Render/Railway or VPS on DigitalOcean/Linode.
- **Observability:** Request logs, error monitoring, basic analytics.

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6) Data Model (High-Level)

- `students` (bio, medical, contacts)
- `guardians` (phone/email, relationship)
- `student_guardian` (links)
- `terms` (label, dates, fees)
- `enrollments` (student, term, status, balance)
- `payments` (amount, method, reference, status)
- `rooms`, `beds`, `allocations`
- `invoices`, `receipts`
- `users`, `roles`, `audit_logs`

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7) Implementation Plan & Timeline (6 Weeks)

Week 1 — Discovery & Design

- Confirm detailed workflows, UX wireframes, data model finalization.

Week 2 — Backend Foundations

- DB schema, auth, roles, core CRUD; payments sandbox setup.

Week 3 — Core Modules

- Students & guardians; terms; enrollments; receipts; exports.

Week 4 — Payments & Reconciliation

- MoMo + bank/aggregator integration; receipts & arrears automation.

Week 5 — Portal, Notifications & Reports

- Self-service portal; SMS/email flows; dashboards & PDFs.

Week 6 — UAT, Training & Go-Live

- Data import (CSV), bug fixes, deployment, cutover plan.

> **Go-Live Support:** 1 month hyper-care included after launch.

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8) Pricing (One-Time Build)

Total Fixed Price: UGX 3,500,000 *(exclusive of taxes & third-party/provider fees)*

Breakdown

Work Package	Cost (UGX)
Discovery, UX & Data Modeling	350,000
Backend (API, DB, Auth, Roles)	900,000
Frontend Admin (students, terms, enrollments)	950,000
Payments Integration (MoMo + 1 bank/aggregator)	600,000
Dashboards & Reports (CSV/PDF)	450,000
Notifications (SMS/email)	200,000
Self-Service Portal (students/guardians)	300,000
Deployment, SSL, Domain wiring, Backups	200,000
UAT, Training, Handover	300,000
TOTAL	**3,500,000**

> **Note:** Regular sum of components is valued higher; a bundle discount is applied to meet the UGX 3.5M budget target.

9) Payment Milestones

- **40% (UGX 1,400,000)** — Project kickoff (contract + design start).
- **30% (UGX 1,050,000)** — MVP delivered (payments + enrollments working).
- **30% (UGX 1,050,000)** — Final acceptance & handover.

10) Recurring / Third-Party Costs (Not Included)

- **Hosting:** ~ UGX 60,000 – 120,000 / month (cloud/app + DB), depending on choice & usage.
- **Domain & SSL:** ~ UGX 80,000 – 120,000 / year.
- **SMS:** provider-based per-SMS fees.
- **Payment Fees:** charged by MoMo/bank/aggregator per transaction (collections/settlement).

We will shortlist providers and optimize cost during setup.

11) Assumptions

- Good Turn Hostel provides branding (logo, colors) and fee schedules.
- One MoMo provider (MTN or Airtel) **and** one bank/aggregator are in scope; additional providers can be added as an enhancement.
- Historical data will be supplied in CSV/Excel for import (if available).
- Up to 3 admin roles; more roles/complex approvals can be scoped later.
- English as the primary UI language (additional languages optional).

12) Optional Add-Ons (Priced Separately)

- **Advanced Bed Management** (inventory KPIs, maintenance): from UGX 400,000
- **Biometric check-in/out**: device & integration TBD
- **Multi-branch / multi-hostel** support: from UGX 1,200,000

13) Quality, Security & Backups

- Secure authentication & role-based access control.
- Encrypted in transit (HTTPS) and at rest (managed DB).
- Daily automated backups, 7–30 day retention.
- Audit logs for payment & enrollment events.
- Documentation & admin manual provided.

14) Next Steps

1. Approve scope & budget (UGX 3,500,000).
2. Sign work order & pay 40% to initiate.
3. Provider accounts (MoMo + aggregator), domain, and branding assets.
4. Kickoff workshop (2 hours(Online Discussion/Meeting)) to finalize workflows & timelines.

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