UPG System

Complete System Manual

With Complete Source Code Documentation

Version 1.0
October 2025

UPG (Ultra Poor Graduation) System - Complete User Manual

Version: 1.0.0 **Last Updated:** October 3, 2025 **System Type:** Web-based Django Application **Database:** MySQL (MariaDB Compatible)

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Part 1: User Manual Documentation

1. System Overview

1.1 What is the UPG System?

The **Ultra-Poor Graduation (UPG) Management System** is a comprehensive web-based platform designed to manage and track the implementation of poverty graduation programs in Kenya. The system supports the complete lifecycle of the UPG program, from household identification and enrollment through training, business development, grant management, and graduation tracking.

1.2 Purpose

The UPG System serves multiple critical purposes:

- **Household Management**: Track ultra-poor households, their demographics, and eligibility for programs
- **Program Implementation**: Manage training modules, mentoring activities, and business development
- **Grant Administration**: Process and track SB (Seed Business) and PR (Performance Recognition) grants
- **Business Group Management**: Facilitate formation and tracking of entrepreneurial business groups
- **Savings Group Tracking**: Monitor community savings groups and their financial activities
- **Reporting & Analytics**: Generate comprehensive reports for M&E and program management
- **Multi-level Access Control**: Role-based access for different stakeholders (County Executives, M&E Staff, Field Associates, Mentors, Beneficiaries)

1.3 System Architecture

Technology Stack: - **Framework**: Django 4.x (Python) - **Database**: MySQL 8.0 (via XAMPP for local development) - **Frontend**: Bootstrap 5, HTML5, CSS3, JavaScript - **Authentication**: Django's built-in authentication with custom User model - **Forms**: Django Crispy Forms with Bootstrap 5

Key Components: 1. **Web Application Layer**: Django-based MVC architecture 2. **Database Layer**: MySQL relational database with normalized schema 3. **Business Logic Layer**: Python models with custom methods and properties 4. **Presentation Layer**: Bootstrap-based responsive UI 5. **Security Layer**: Role-based access control and audit logging

Deployment Architecture: - **Development**: Local server via Django's development server on localhost:8000 - **Database**: XAMPP MySQL server on localhost:3306 - **Static Files**: Served via Django's staticfiles system - **Media Files**: User uploads stored in /media directory

1.4 System Requirements

Server Requirements: - Windows 10 or higher / Linux / macOS - Python 3.8 or higher - MySQL 8.0 or MariaDB 10.5+ - 4GB RAM minimum (8GB recommended) - 10GB free disk space

Client Requirements: - Modern web browser (Chrome, Firefox, Edge, Safari) - Internet connection (for initial setup and updates) - Screen resolution: 1280x720 minimum

2. User Roles & Permissions

The UPG System implements a hierarchical role-based access control system. Each role has specific permissions across different modules.

2.1 Role Definitions

County Executive (CECM & Governor)

Access Level: Executive Overview **Primary Functions**: Strategic oversight, high-level reporting, grant approval **Full Access Modules**: - Dashboard (executive view) - Grants (view and approve) - Reports (comprehensive)

Read-Only Access: - Programs - Households - Business Groups - Savings Groups - Training

Restricted Access: - No direct access to Settings - Cannot modify training or household data

County Assembly Member

Access Level: Legislative Oversight **Primary Functions**: Monitoring, program review, report viewing **Full Access Modules**: - Dashboard (legislative view) - Reports

Read-Only Access: - Programs - Households - Business Groups - Savings Groups

ICT Administrator

Access Level: System Administrator **Primary Functions**: System configuration, user management, full data access **Full Access Modules**: ALL modules including: - Dashboard (admin view) - Programs - Households - Business Groups - Savings Groups - Surveys - Training - Grants - Reports - Settings - User Management

M&E (Monitoring & Evaluation) Staff

Access Level: Program Management **Primary Functions**: Data collection, report generation, program monitoring **Full Access Modules**: - Dashboard (M&E view) - Programs - Households - Business Groups - Savings Groups - Surveys - Training - Reports

Read-Only Access: - Grants

Field Associate / Mentor Supervisor

Access Level: Field Operations Management **Primary Functions**: Mentor oversight, training coordination, field data entry **Full Access Modules**: - Dashboard (field associate view) - Households - Business Groups - Savings Groups - Surveys - Training - Grants (application and tracking)

Read-Only Access: - Programs - Reports

Mentor (Business Mentor)

Access Level: Direct Beneficiary Interaction **Primary Functions**: Training delivery, household visits, mentoring, data collection **Full Access Modules**: - Dashboard (mentor view) - Households (assigned only) - Business Groups (assigned only) - Savings Groups (assigned only) - Surveys (data collection) - Training (assigned trainings)

Read-Only Access: - Programs - Reports (limited to own activities)

Beneficiary

Access Level: Self-service View **Primary Functions**: View own household data, program participation **Full Access Modules**: - Dashboard (beneficiary view)

Read-Only Access: - Own household information - Business group participation - Savings group participation - Training schedules

2.2 Permission Matrix

ModuleCounty ExecAssemblyICT AdminM&E StaffField AssociateMentorBeneficiary**Dashboard**FullFullFullFullFullFullRead**Programs**ReadReadFullFullReadReadRead**Households**ReadReadFullFullFullFull (assigned)Read (own)**Business Groups**ReadReadFullFullFullFull (assigned)Read (own)**Savings Groups**ReadReadFullFullFullFull (assigned)Read (own)**Training**Read-FullFullFullFull (assigned)Read**Surveys**--FullFullFullFull-**Grants**Full-FullReadFull--**UPG Grants**Approve-FullReadFull--**Reports**FullFullFullFullReadRead-**Settings**--Full----**Forms**--FullFullFull (assigned)Full (assigned)-**Legend:** - **Full**: Create, Read, Update, Delete - **Read**: View only - **-**: No access

3. Module Documentation

3.1 Accounts Module

Purpose: User authentication, registration, and profile management

Features:

User Registration & Login

- Secure login with username and password
- Session management (1-hour timeout)
- Password reset functionality
- Email-based password recovery

User Profile Management

- Profile information (avatar, bio)
- Village assignments for mentors
- Activity tracking

Password Reset Flow

- Forgot password request
- Token-based reset (24-hour validity)

- Email notification
- Secure password update

User Model Fields:

- Username (unique)
- Email (unique)
- First Name, Last Name
- Role (from predefined choices)
- Phone Number
- Office/Location
- Country (default: Kenya)
- Active status
- Created/Updated timestamps

Key URLs:

- `/accounts/login/` - Login page
- `/accounts/logout/` - Logout
- `/accounts/profile/` - User profile
- `/accounts/forgot-password/` - Password reset request
- `/accounts/reset-password/<token>/` - Password reset form

How to Use:

Logging In: 1. Navigate to the system URL (e.g., http://localhost:8000) 2. Enter your username and password 3. Click "Login" 4. You'll be redirected to your role-specific dashboard

Resetting Password: 1. Click "Forgot Password?" on login page 2. Enter your registered email address 3. Check your email for reset link 4. Click the link and enter new password 5. Confirm new password 6. Return to login page

3.2 Core Module

Purpose: Core system entities and geographical data management

Key Entities:

1. Counties - Manages county-level geographical data - Links to sub-counties and villages - Supports multi-county programs

2. Sub-Counties - Second-level administrative divisions - Linked to parent county - Contains multiple villages

3. Villages - Lowest level of geographic organization - Tracks saturation levels - Distance to market (in kilometers) - Program area designation - Qualified households count

4. Mentors - Business mentor contact information - Linked to user accounts - Country and office information

5. Business Mentor Cycles (BM Cycles) - Training cycle management - Links mentors to field associates - Project and office tracking - Cycle identifier (e.g., FY25C1)

6. Programs - Program definition and management - Start/end dates - Target households and villages - Status tracking (planning, active, completed, suspended) - Budget and cycle information

7. Audit Logs - Complete system activity tracking - User actions (create, update, delete, view, login, logout) - IP address logging - Timestamp tracking - Change descriptions

8. ESR Import System - External Service Record import tracking - File upload and processing - Success/failure tracking - Error logging - Support for household, business group, savings group, and survey data

9. SMS Logging - SMS notification tracking - Provider tracking (Africa's Talking, Twilio) - Success/failure status - Delivery timestamps - Linked to households, trainings, and mentors

Key Features:

Geographic Hierarchy:

```
Country (Kenya)
  ■■■ County
       ■■■ Sub-County
            ■■■ Village
                 ■■■ Households
```

Audit Trail: - Every significant action is logged - User identity tracking - IP address recording - Detailed change descriptions - Searchable audit history

SMS Integration: - Africa's Talking API (primary) - Twilio API (fallback) - Configurable sender ID - Delivery status tracking - Error handling and logging

3.3 Households Module

Purpose: Comprehensive household data management and eligibility tracking

Key Entities:

1. Household Complete household information including: - Geographic/Administrative Information: - Village, Sub-County, County - Constituency, District, Division - Location, Sub-Location - GPS Coordinates (latitude/longitude)

Household Head Information:

- Full name (first, middle, last)
- Gender, Date of Birth
- National ID Number
- Phone Number

Socio-Economic Data:

- Monthly income

- Assets (stored as JSON)
- Electricity access
- Clean water access
- Location type (rural/urban/remote)
- Disability status

Program Participation:

- Consent status
- Eligibility assessments
- Program enrollment tracking

2. PPI (Poverty Probability Index) - Household poverty scoring - Eligibility score (0-100) - Assessment date - Baseline, midline, endline tracking

3. Household Members - Individual member records - Relationship to household head - Age, gender, education level - ID/Birth certificate numbers - Program participation flag

4. Household Programs - Program participation tracking - Enrollment/graduation dates - Mentor assignment - Participation status: - Eligible - Enrolled - Active - Graduated - Dropped Out - Dropout reason tracking

5. UPG Milestones 12-month graduation milestones: - Month 1: PPI Assessment & Business Training Start - Month 2: Business Group Formation - Month 3: Business Plan Development - Month 4: SB Grant Application - Month 5: SB Grant Disbursement - Month 6: Business Operations Start - Month 7: Mid-term Assessment - Month 8: Business Savings Group Formation - Month 9: PR Grant Eligibility Assessment - Month 10: PR Grant Application - Month 11: Final Business Assessment - Month 12: Graduation Assessment

Milestone Statuses: - Not Started - In Progress - Completed - Delayed - Skipped

6. Household Surveys - Baseline, midline, endline surveys - Income level tracking - Assets inventory - Savings amount - Survey date and surveyor tracking

Eligibility Assessment System:

The system includes comprehensive eligibility assessment tools:

Quick Eligibility Check: - Basic criteria validation - PPI score verification - Consent verification

Comprehensive Scoring: - Multi-factor eligibility calculation - Weighted scoring system - Automatic qualification recommendations

Household Qualification Tool: - Full qualification assessment - Detailed eligibility reports - Program-specific criteria evaluation

Key URLs:

- `/households/` - Household list
- `/households/add/` - Add new household
- `/households/<id>/` - Household detail
- `/households/<id>/edit/` - Edit household
- `/households/<id>/members/` - Manage household members

- `/households/<id>/eligibility/` - Run eligibility assessment
- `/households/<id>/milestones/` - Track UPG milestones

How to Use:

Adding a Household: 1. Navigate to Households module 2. Click "Add Household" 3. Fill in required fields: - Household head information - Geographic location - Contact details 4. Save the household 5. Add household members 6. Run eligibility assessment

Tracking Milestones: 1. Open household detail page 2. Click "UPG Milestones" 3. View 12-month milestone tracker 4. Update milestone status 5. Add completion dates and notes 6. Track overdue milestones

3.4 Business Groups Module

Purpose: Management of entrepreneurial business groups formed by program participants

Key Entities:

1. Business Group Core business group information: - Group name and formation date - Program linkage - Business type categories: - Crop - Retail - Service - Livestock - Skill - Business type detail (e.g., cereal, barber shop) - Group size (typically 2-3 entrepreneurs) - Current business health status: - Red: Poor Performance - Yellow: Fair Performance - Green: Good Performance - Participation status: - Active - Withdrawn - Suspended

2. Business Group Members Member management: - Household linkage - Role in group: - Leader - Treasurer - Secretary - Member - Joined date - Active status - One household per business group (unique constraint)

3. SB Grant (Seed Business Grant) Initial capital grants: - Business group linkage - Business type and details - Funding status: - Applied - Approved - Funded - Not Funded - Grant amount (configurable) - Funded date - Group leadership details: - Leader name - Treasurer name - Secretary name

4. PR Grant (Performance Recognition Grant) Second-tier performance-based grants: - Business group linkage - Business type - Funding status (same options as SB Grant) - Grant amount - Funded date - Leadership details - Performance qualification justification

5. Business Progress Surveys Regular progress tracking: - Survey date and surveyor - Financial metrics: - Grant value - Grant used - Profit generated - Business inputs - Business inventory - Business cash on hand

Business Health Assessment:

The system tracks business health using a color-coded system:

Green (Good Performance): - Regular profit generation - Full utilization of grants - Growing inventory and cash reserves - Consistent member participation

Yellow (Fair Performance): - Moderate profit generation - Partial grant utilization - Stable but not growing - Some member participation issues

Red (Poor Performance): - Little to no profit - Poor grant utilization - Declining inventory - Member dropout or conflict

Key URLs:

- `/business-groups/` - Business group list
- `/business-groups/add/` - Create new business group
- `/business-groups/<id>/` - Business group detail
- `/business-groups/<id>/edit/` - Edit business group
- `/business-groups/<id>/members/` - Manage members
- `/business-groups/<id>/progress/` - Track progress surveys
- `/business-groups/<id>/sb-grant/` - SB Grant application
- `/business-groups/<id>/pr-grant/` - PR Grant application

How to Use:

Forming a Business Group: 1. Navigate to Business Groups module 2. Click "Create Business Group" 3. Enter group details: - Group name - Business type - Formation date 4. Add group members (2-3 households) 5. Assign roles (Leader, Treasurer, Secretary) 6. Save the group

Applying for SB Grant: 1. Open business group detail page 2. Click "Apply for SB Grant" 3. Fill in application: - Business plan - Required grant amount - Leadership confirmation 4. Submit application 5. Await review and approval 6. Track funding status

Tracking Business Progress: 1. Open business group detail page 2. Click "Add Progress Survey" 3. Enter financial data: - Grant utilization - Profit/loss - Inventory levels - Cash on hand 4. Update business health status 5. Save survey

3.5 Savings Groups Module

Purpose: Community-based savings group management and tracking

Key Entities:

1. Business Savings Group (BSG) Community savings entities: - Group name and formation date - Business group linkages (many-to-many) - Member count and targets - Savings to date (cumulative) - Meeting details: - Meeting day (e.g., every Tuesday) - Meeting location - Savings frequency (weekly, bi-weekly, monthly) - Active status

2. BSG Members Individual member tracking: - Household linkage - Role in savings group: - Chairperson - Secretary - Treasurer - Member - Joined date - Total savings accumulated - Active status

3. Savings Records Individual savings transactions: - BSG and member linkage - Savings amount - Savings date - Recorded by (user) - Notes - Chronological tracking

4. BSG Progress Surveys Monthly performance tracking: - Survey date - Savings last month - Month recorded - Attendance at meeting - Surveyor information

Savings Group Features:

Automatic Calculations: - Total members (individual + business group members) - Cumulative savings - Average savings per member - Attendance rates - Monthly savings trends

Meeting Management: - Regular meeting schedules - Location tracking - Attendance recording - Savings collection tracking

Financial Tracking: - Individual member savings - Group cumulative savings - Monthly savings patterns - Withdrawal tracking (if applicable)

Key URLs:

- `/savings-groups/` - Savings group list
- `/savings-groups/add/` - Create new savings group
- `/savings-groups/<id>/` - Savings group detail
- `/savings-groups/<id>/edit/` - Edit savings group
- `/savings-groups/<id>/members/` - Manage members
- `/savings-groups/<id>/savings/` - Record savings
- `/savings-groups/<id>/progress/` - Progress surveys

How to Use:

Creating a Savings Group: 1. Navigate to Savings Groups module 2. Click "Create Savings Group" 3. Enter group details: - Group name - Target member count - Meeting schedule - Meeting location 4. Link business groups (if applicable) 5. Add individual members 6. Assign roles (Chairperson, Secretary, Treasurer) 7. Save the group

Recording Savings: 1. Open savings group detail page 2. Click "Record Savings" 3. Select member 4. Enter amount saved 5. Add date and notes 6. Save transaction 7. View updated member total savings

Monthly Progress Tracking: 1. Open savings group detail page 2. Click "Add Progress Survey" 3. Enter: - Total savings for the month - Meeting attendance - Month being recorded 4. Save survey 5. View savings trends over time

3.6 Training Module

Purpose: Comprehensive training and mentoring activity management

Key Entities:

1. Training Training modules and sessions: - Name and module ID - Module number (sequential) - BM Cycle linkage - Assigned mentor - Training details: - Duration in hours - Location/venue - Participant count - Training dates (multiple sessions) - Status: - Planned - Active - Completed - Cancelled - Start and end dates - Maximum households per training (default: 25) - Description

2. Training Attendance Attendance tracking: - Training linkage - Household linkage - Attendance status (present/absent) - Training date - Marked by (mentor) - Attendance marked timestamp

3. Household Training Enrollment Enrollment management: - One household per training rule - Training linkage - Enrollment date - Enrollment status: - Enrolled - Completed - Dropped Out - Transferred - Completion date

4. Mentoring Visits On-site household visits: - Visit name and household - Mentor - Topic covered - Visit type: - On-site - Phone Check - Virtual - Visit date - Detailed notes

5. Phone Nudges Phone call tracking: - Household and mentor - Nudge type: - Training Reminder - Follow-up Call - Support Call - Regular Check-in - Business Advice - Call date and time - Duration in minutes - Successful contact status - Call notes

6. Mentoring Reports Periodic mentor reporting: - Reporting period (weekly, monthly, quarterly) - Period start and end dates - Summary statistics: - Households visited - Phone nudges made - Trainings conducted - New households enrolled - Narrative report: - Key activities - Challenges faced - Successes achieved - Next period plans

Training System Features:

Enrollment Management: - Automatic slot tracking (25 max per training) - Available slots calculation - One household per training enforcement - Enrollment status tracking

Attendance Tracking: - Session-by-session attendance - Mentor-marked attendance - Timestamp tracking - Attendance rate calculations

Mentoring Activity Tracking: - Comprehensive visit logging - Phone call documentation - Activity type categorization - Time tracking - Success rate monitoring

Reporting System: - Structured periodic reports - Statistical summaries - Narrative reporting - Challenge documentation - Success tracking

Key URLs:

- `/training/` - Training list
- `/training/add/` - Create new training
- `/training/<id>/` - Training detail
- `/training/<id>/edit/` - Edit training
- `/training/<id>/attendance/` - Mark attendance
- `/training/<id>/enroll/` - Enroll households
- `/training/mentoring-visits/` - Mentoring visit list
- `/training/mentoring-visits/add/` - Add visit
- `/training/phone-nudges/` - Phone nudge list
- `/training/phone-nudges/add/` - Add phone nudge
- `/training/reports/` - Mentoring reports
- `/training/reports/add/` - Create report

How to Use:

Creating a Training: 1. Navigate to Training module 2. Click "Create Training" 3. Enter training details: - Name and module number - BM Cycle - Assigned mentor - Location and duration - Training dates 4. Set maximum households (default 25) 5. Save training

Enrolling Households: 1. Open training detail page 2. Click "Enroll Households" 3. Select households from available list 4. System checks: - Available slots - Household not in another training 5. Confirm enrollments

Marking Attendance: 1. Open training detail page 2. Click "Mark Attendance" 3. Select training date 4. Check attendance for each household 5. Save attendance 6. View attendance rates

Recording Mentoring Visit: 1. Navigate to Mentoring Visits 2. Click "Add Visit" 3. Enter visit details: - Household visited - Visit type (on-site, phone, virtual) - Topic covered - Visit date - Detailed notes 4. Save visit

Logging Phone Nudges: 1. Navigate to Phone Nudges 2. Click "Add Phone Nudge" 3. Enter call details: - Household called - Nudge type - Call date/time - Duration - Successful contact (yes/no) - Call notes 4. Save nudge

Submitting Mentoring Report: 1. Navigate to Mentoring Reports 2. Click "Create Report" 3. Select reporting period 4. Enter period dates 5. Fill in statistics: - Households visited - Phone calls made - Trainings conducted 6. Write narrative: - Key activities - Challenges - Successes - Next period plans 7. Submit report

3.7 Surveys Module

Purpose: Dynamic survey and data collection management

Key Entities:

1. Survey Survey definitions: - Name and description - Version tracking - Active status - Created by (M&E staff) - Creation date

2. Survey Response Survey submissions: - Survey linkage - Respondent (household) - Surveyor (user) - Response data (JSON format) - Completed status - Submission timestamp

Survey Features:

Dynamic Survey Creation: - Flexible survey structure - Multiple question types - Version control - Activation/deactivation

Response Collection: - Mobile-friendly data entry - JSON-based data storage - Respondent tracking - Completion status - Surveyor attribution

Data Management: - Structured data storage - Easy export capabilities - Response aggregation - Version comparison

Key URLs:

- `/surveys/` - Survey list
- `/surveys/add/` - Create new survey
- `/surveys/<id>/` - Survey detail
- `/surveys/<id>/edit/` - Edit survey
- `/surveys/<id>/respond/` - Fill survey
- `/surveys/<id>/responses/` - View responses

How to Use:

Creating a Survey (M&E Staff): 1. Navigate to Surveys module 2. Click "Create Survey" 3. Enter survey name and description 4. Set version number 5. Define survey questions (in survey structure) 6. Activate survey 7. Assign to field staff/mentors

Filling a Survey (Mentor/Field Associate): 1. Navigate to assigned surveys 2. Select survey to complete 3. Select household (respondent) 4. Fill in all required fields 5. Review responses 6. Submit survey 7. Confirmation message displayed

3.8 Programs Module

Purpose: Independent program creation and management beyond UPG

Key Entities:

1. Program Program definitions: - Name and description (unique) - Program type: - Ultra-Poor Graduation - Microfinance - Agricultural Support - Education Support - Health Initiative - Infrastructure Development - Skills Training - Youth Empowerment - Women Empowerment - Other - Status: - Draft - Active - Suspended - Completed - Cancelled - Budget and target beneficiaries - Duration in months - Start/end dates - Application deadline - Created by (County Executive or ICT Admin) - County and sub-county - Eligibility criteria - Application requirements - Flags: - Accepting applications - Requires approval

2. Program Application Household applications to programs: - Program and household linkage - Application status: - Pending Review - Under Review - Approved - Rejected - Waitlisted - Withdrawn - Application date - Motivation letter - Additional notes - Review process: - Reviewed by (user) - Review date - Review notes - Approval process: - Approved by (user) - Approval date

3. Program Beneficiary Active program participants: - Program and household linkage - Participation status: - Active - Suspended - Graduated - Dropped Out - Terminated - Enrollment date - Graduation date - Progress notes - Benefits received (monetary value)

Program Features:

UPG-Specific Features: Programs with type "Ultra-Poor Graduation" automatically support: - PPI scoring requirement - Business group formation - Savings group formation - Graduation milestone tracking - SB/PR grant eligibility - 12-month default duration

Application Workflow: 1. Household submits application 2. Status: Pending Review 3. Staff reviews application 4. Status: Under Review 5. Approval/rejection decision 6. Status: Approved/Rejected 7. If approved, household becomes beneficiary

Beneficiary Tracking: - Enrollment tracking - Progress monitoring - Benefits quantification - Graduation pathway - Dropout management

Key URLs:

- `/programs/` - Program list
- `/programs/add/` - Create new program
- `/programs/<id>/` - Program detail
- `/programs/<id>/edit/` - Edit program
- `/programs/<id>/apply/` - Submit application
- `/programs/<id>/applications/` - View applications
- `/programs/<id>/beneficiaries/` - View beneficiaries

How to Use:

Creating a Program (County Executive): 1. Navigate to Programs module 2. Click "Create Program" 3. Enter program details: - Name and description - Program type - Budget and targets - Duration - Start/end dates 4. Define eligibility criteria 5. List application requirements 6. Set application deadline 7. Enable "Accepting Applications" 8. Save program

Applying to Program (Household): 1. Navigate to Programs 2. Browse available programs 3. Click "Apply" on desired program 4. Read eligibility criteria 5. Fill application form: - Motivation letter - Supporting information 6. Submit application 7. Track application status

Reviewing Applications (Staff): 1. Navigate to program applications 2. Filter by status (Pending Review) 3. Open application for review 4. Read application details 5. Check eligibility 6. Add review notes 7. Approve or reject application 8. System updates status

Managing Beneficiaries: 1. Navigate to program beneficiaries 2. View enrolled households 3. Track progress 4. Update participation status 5. Record benefits received 6. Manage graduations or dropouts

3.9 Grants Module

Purpose: Basic grant management functionality

The Grants module provides foundational grant management capabilities that are extended by the UPG Grants module for program-specific grant types.

Key URLs:

- `/grants/` - Grant list
- `/grants/add/` - Create grant
- `/grants/<id>/` - Grant detail

3.10 UPG Grants Module

Purpose: Comprehensive UPG-specific grant management (SB & PR grants)

Key Entities:

1. Household Grant Application Universal grant application system: - Applicant types: - Individual household - Business group - Savings group - Submitted by (user) - Program linkage (optional) - Grant types: - Seed Business Grant - Performance Recognition Grant - Livelihood Grant - Emergency Grant - Education Support Grant - Housing Improvement Grant - Other - Status workflow: - Draft - Submitted - Under Review - Approved - Rejected - Disbursed - Cancelled - Financial details: - Requested amount - Approved amount - Disbursed amount - Application content: - Title and purpose - Business plan - Expected outcomes - Budget breakdown (JSON) - Supporting documents - Review process: - Reviewed by - Review date - Review notes - Review score (0-100) - Approval process: - Approved by (requires specific roles) - Approval date - Approval notes - Disbursement tracking: - Disbursement date - Disbursed amount - Disbursed by - Disbursement method (bank transfer, mobile money, cash, check) - Reference number - Utilization tracking: - Utilization report - Final outcomes

2. SB Grant (Seed Business Grant) Initial seed capital for business groups: - Program and applicant linkage - Submitted by - Grant amount calculations: - Base grant amount (default: 15,000 KES) -

Calculated grant amount (auto-calculated) - Final grant amount (approved amount) - Calculation factors: - Group size factor (multiplier based on group size) - Business type factor (multiplier based on business type) - Location factor (geographic adjustment) - Performance factor (based on training completion, etc.) - Status: - Pending - Under Review - Approved - Disbursed - Rejected - Cancelled - Disbursement status: - Not Disbursed - Partially Disbursed - Fully Disbursed - Application details: - Business plan - Projected income - Startup costs - Monthly expenses - Review and approval process - Disbursement tracking - Utilization reporting

Grant Amount Calculation Algorithm:

```
Base Amount = 15,000 KES

Group Size Factor:
- 20+ members: 1.20 (20% bonus)
- 15-19 members: 1.10 (10% bonus)
- 8-14 members: 1.00 (standard)
- <8 members: 0.90 (10% reduction)

Business Type Factor:
- Agriculture/Livestock: 1.15 (15% bonus)
- Manufacturing/Processing: 1.10 (10% bonus)
- Others: 1.00 (standard)

Location Factor:
- Remote/Rural: 1.05 (5% bonus)
- Urban: 1.00 (standard)

Performance Factor:
- Training completion ≥90%: 1.10 (10% bonus)
- Training completion 60-89%: 1.00 (standard)
- Training completion <60%: 0.95 (5% reduction)

Calculated Amount = Base × Group Size × Business Type × Location × Performance

Caps:
- Maximum: 25,000 KES
- Minimum: 10,000 KES
```

3. PR Grant (Performance Recognition Grant) Performance-based second grant: - Requires successful SB Grant completion - Program and applicant linkage - SB Grant linkage (required) - Grant amount (default: 10,000 KES) - Status: - Not Eligible Yet - Eligible - Pending - Under Review - Approved - Disbursed - Rejected - Cancelled - Performance assessment: - Performance score (0-100) - Performance rating: - Excellent Performance - Good Performance - Satisfactory Performance - Poor Performance - Performance assessment narrative - Business metrics: - Revenue generated - Jobs created - Savings accumulated - Eligibility assessment: - Assessed by - Assessment date - Approval and disbursement tracking

PR Grant Eligibility Criteria: 1. SB Grant must be fully disbursed 2. SB Grant utilization report must be completed 3. Business performance metrics must meet minimum standards 4. Training completion requirements met 5. Savings group participation (for graduation programs)

4. Grant Disbursement Individual disbursement transaction tracking: - Grant linkage (SB or PR) - Disbursement type - Amount - Disbursement date - Method (bank transfer, mobile money, cash, check) - Transaction details: - Reference number - Recipient name - Recipient contact - Processed by (user) - Processing notes

Grant Management Features:

Automatic Calculations: - SB Grant amount auto-calculation based on multiple factors - Remaining amount tracking - Disbursement percentage calculation - Eligibility scoring

Workflow Management: - Draft → Submitted → Under Review → Approved → Disbursed - Role-based approval requirements - Review score assignment - Approval notes and documentation

Financial Tracking: - Requested vs. approved amounts - Partial disbursement support - Multiple disbursement transactions - Utilization tracking - Final outcome reporting

Reporting: - Grant pipeline reports - Disbursement reports - Utilization reports - Performance analysis

Key URLs:

- `/upg-grants/` - UPG grant list
- `/upg-grants/household-applications/` - Household grant applications
- `/upg-grants/household-applications/add/` - New household grant application
- `/upg-grants/sb-grants/` - SB Grant list
- `/upg-grants/sb-grants/add/` - New SB Grant application
- `/upg-grants/sb-grants/<id>/` - SB Grant detail
- `/upg-grants/pr-grants/` - PR Grant list
- `/upg-grants/pr-grants/add/` - New PR Grant application
- `/upg-grants/pr-grants/<id>/` - PR Grant detail
- `/upg-grants/pr-grants/<id>/eligibility/` - Check PR Grant eligibility
- `/upg-grants/disbursements/` - Disbursement list

How to Use:

Applying for Household Grant: 1. Navigate to UPG Grants → Household Grant Applications 2. Click "New Application" 3. Select applicant type (household, business group, or savings group) 4. Select specific applicant 5. Choose grant type 6. Enter requested amount 7. Fill in application: - Title and purpose - Business plan (if applicable) - Expected outcomes - Budget breakdown 8. Upload supporting documents 9. Save as draft or submit 10. Track application status

Applying for SB Grant (Business Group): 1. Ensure business group is formed 2. Navigate to UPG Grants → SB Grants 3. Click "New SB Grant Application" 4. Select business group 5. System auto-calculates grant amount 6. Review calculation factors: - Group size - Business type - Location - Training performance 7. Fill in business plan: - Projected income - Startup costs - Monthly expenses 8. Submit application 9. System creates application with calculated amount

Reviewing Grant Application: 1. Navigate to pending applications 2. Open application for review 3. Check eligibility criteria 4. Review business plan and financials 5. Assign review score (0-100) 6. Add review notes 7. Update status to "Under Review" 8. Submit for approval or reject

Approving Grant (County Executive/Director): 1. Navigate to applications under review 2. Open application 3. Review all documentation: - Application details - Review notes - Review score 4. Make approval decision: - Approve: Set approved amount - Reject: Provide rejection reason 5. Add approval notes 6. Confirm approval/rejection 7. System updates status

Disbursing Grant: 1. Navigate to approved grants 2. Select grant for disbursement 3. Verify approved amount 4. Click "Disburse Funds" 5. Enter disbursement details: - Amount (full or partial) - Disbursement date - Method (bank, mobile money, cash) - Reference number - Recipient details 6. Add processing notes 7. Confirm disbursement 8. System records transaction 9. System updates disbursement status

Applying for PR Grant: 1. Ensure SB Grant is disbursed 2. Complete SB Grant utilization report 3. Navigate to UPG Grants → PR Grants 4. Click "New PR Grant Application" 5. Select business group with SB Grant 6. System checks eligibility: - SB Grant disbursed - Utilization report completed - Performance metrics 7. If eligible, fill in PR application: - Performance assessment - Revenue generated - Jobs created - Savings accumulated 8. Submit PR Grant application 9. Follow same review/approval/disbursement workflow

Recording Grant Utilization: 1. Navigate to disbursed grants 2. Open grant detail 3. Click "Add Utilization Report" 4. Enter: - How funds were used - Items purchased - Outcomes achieved 5. Upload receipts/photos (if applicable) 6. Set utilization date 7. Save report 8. Mark grant as "Utilized"

3.11 Forms Module

Purpose: Dynamic forms system for M&E staff to create and assign surveys

Key Entities:

1. Form Template Dynamic form definitions: - Name and description - Form type: - Household Survey - Business Progress Survey - PPI Assessment - Baseline Survey - Midline Survey - Endline Survey - Training Evaluation - Mentoring Report - Custom Form - Status: - Draft - Active - Inactive - Archived - Form structure (JSON-based field definitions) - Created by (M&E staff) - Form settings: - Allow multiple submissions - Require photo evidence - Require GPS location - Auto-assign to mentors

2. Form Field Individual field definitions: - Form template linkage - Field name and label - Field type: - Text Input - Text Area - Number Input - Email Input - Phone Number - Date Picker - Date & Time - Dropdown Select - Radio Buttons - Checkboxes - Yes/No - File Upload - Image Upload - Rating Scale - GPS Location - Digital Signature - Field configuration: - Required/optional - Help text - Placeholder - Default value - Choice options (for select/radio/checkbox) - Validation rules: - Min/max length - Min/max value - Regex pattern - Display order - Conditional display rules

3. Form Assignment Assignment of forms to field staff: - Form template linkage - Assigned by (M&E staff) - Assignment type: - Direct to Mentor - Via Field Associate - Assignee (field associate or mentor) - Assignment details: - Title and instructions - Due date - Priority (low, medium, high, urgent) - Status: - Pending - Accepted - In Progress - Completed - Overdue - Cancelled - Target criteria: - Target villages (JSON list) - Target households (JSON list) - Target business groups (JSON list) - Minimum submissions required

4. Form Assignment Mentor Field associate delegation to mentors: - Assignment linkage - Mentor - Assigned by field associate - Instructions - Due date - Status tracking

5. Form Submission Completed form submissions: - Assignment and form template linkage - Submitted by (mentor/field associate) - Submission date - Form data (JSON) - Attachments: - Photo evidence - Document attachments - Location data: - GPS latitude/longitude - Location name - Status: - Draft - Submitted - Reviewed - Approved - Rejected - Review process: - Reviewed by - Review date - Review notes - Entity linkages: - Household - Business group

Forms System Features:

Dynamic Form Builder: - Drag-and-drop field creation (conceptual) - Multiple field types - Conditional logic - Validation rules - Custom field ordering

Assignment Workflow:

```
M&E Staff creates form template
    ↓
M&E Staff assigns to Field Associate or Mentor
    ↓
Field Associate (optional) reassigns to Mentors
    ↓
Mentor receives assignment notification
    ↓
```

```
Mentor accepts and starts form
    ↓
Mentor completes form in field
    ↓
Mentor submits form
    ↓
M&E Staff reviews submission
    ↓
M&E Staff approves or requests revision
```

Mobile Data Collection: - GPS location capture - Photo evidence upload - Offline data entry (conceptual) - GPS-based field verification

Data Quality: - Required field enforcement - Validation rules - Review and approval workflow - Revision tracking

Key URLs:

- `/forms/` - Form template list
- `/forms/create/` - Create new form template
- `/forms/<id>/` - Form template detail
- `/forms/<id>/edit/` - Edit form template
- `/forms/<id>/fields/` - Manage form fields
- `/forms/<id>/assign/` - Assign form
- `/forms/assignments/` - My form assignments
- `/forms/assignments/<id>/` - Assignment detail
- `/forms/assignments/<id>/submit/` - Submit form
- `/forms/submissions/` - Submission list
- `/forms/submissions/<id>/` - Submission detail
- `/forms/submissions/<id>/review/` - Review submission

How to Use:

Creating a Form Template (M&E Staff): 1. Navigate to Forms module 2. Click "Create Form Template" 3. Enter form details: - Name and description - Form type 4. Add form fields: - Click "Add Field" - Select field type - Configure field properties - Set validation rules - Add help text - Set display order 5. Configure form settings: - Multiple submissions allowed - Photo evidence required - GPS location required 6. Save form as draft 7. Test form 8. Activate form

Assigning Form to Field Staff: 1. Open form template 2. Click "Assign Form" 3. Choose assignment type: - Direct to Mentor - Via Field Associate 4. Select assignee(s) 5. Enter assignment details: - Title and instructions - Due date - Priority level 6. Set target criteria (optional): - Specific villages - Specific households - Specific business groups 7. Set minimum submissions required 8. Send assignment

Field Associate Delegating to Mentors: 1. View assigned forms 2. Open assignment 3. Click "Assign to Mentors" 4. Select mentors 5. Add specific instructions for each mentor 6. Set individual due dates 7. Confirm assignments

Completing Form (Mentor): 1. View assigned forms 2. Open assignment 3. Click "Fill Form" 4. Select target entity (household/business group) 5. Fill all required fields 6. Capture GPS location (if required) 7. Take photos (if required) 8. Review all entries 9. Save as draft or submit 10. Confirmation message

Reviewing Submission (M&E Staff): 1. Navigate to Form Submissions 2. Filter by pending review 3. Open submission 4. Review all data: - Form responses - Photos - GPS location 5. Check data quality 6.

Add review notes 7. Approve or request revision 8. If approved, data becomes final 9. If revision needed, notify submitter

3.12 Reports Module

Purpose: Reporting and analytics system

Key Entities:

1. Report Report definitions: - Name and description - Report type: - Dashboard - Tabular Report - Chart/Graph - Custom Report - Configuration (JSON) - Created by - Active status

Reporting Features:

Built-in Reports: - Household enrollment reports - Training completion reports - Grant disbursement reports - Business group performance - Savings group progress - Mentor activity reports - Program performance dashboards

Report Generation: - Filter by date range - Filter by geographic area - Filter by program - Export to CSV/Excel - PDF generation (conceptual)

Dashboard Analytics: - Real-time statistics - Visual charts and graphs - Trend analysis - Performance indicators

Key URLs:

- `/reports/` - Report list
- `/reports/<id>/` - View report
- `/reports/<id>/generate/` - Generate report
- `/reports/<id>/export/` - Export report

How to Use:

Generating a Report: 1. Navigate to Reports module 2. Select report type 3. Set filters: - Date range - Geographic area - Program - Other criteria 4. Click "Generate Report" 5. View report on screen 6. Export if needed (CSV/Excel)

3.13 Dashboard Module

Purpose: Role-based dashboard views with key metrics

Dashboard Types:

1. Admin Dashboard (ICT Admin) Comprehensive system overview: - Program overview statistics - Geographic coverage maps - Financial metrics (all grant types) - Training progress - Total households enrolled - Active business groups - Grant disbursements (SB, PR, Household) - Mentor activity logs - System health indicators

2. Mentor Dashboard Mentor-specific view: - Assigned trainings (current and upcoming) - Assigned households - Recent mentoring visits - Recent phone nudges - Grant applications from assigned households - Upcoming training sessions (next 7 days) - Monthly activity statistics - Household grant status tracking

3. Executive Dashboard (County Executive/Assembly) High-level strategic overview: - Total program statistics - Financial summary (all grant disbursements) - Active households and programs - Mentor coverage - Key performance indicators - Budget utilization

4. M&E Dashboard Monitoring and evaluation focus: - Total mentor activities (visits + calls) - Recent mentoring visits (last 30 days) - Recent phone nudges (last 30 days) - Mentor activity rankings - Training completion rates - Survey completion status - Data quality indicators

5. Field Associate Dashboard Field operations overview: - Managed mentors - Total and active trainings - Households in training - Form assignments - Mentor performance

6. General Dashboard Basic system statistics for other roles

Dashboard Features:

Real-time Statistics: - Auto-refreshing data - Interactive charts - Drill-down capabilities - Quick action links

Personalized Views: - Role-based content - User-specific data - Geographic filtering - Program filtering

Activity Tracking: - Recent activities - Pending tasks - Overdue items - Upcoming deadlines

Key URLs:

- `/` - Main dashboard (role-based routing)

Dashboard Usage:

Accessing Your Dashboard: 1. Log in to the system 2. Automatically redirected to role-appropriate dashboard 3. View key statistics and metrics 4. Access quick links to common tasks 5. Monitor pending activities 6. Review recent updates

3.14 Settings Module

Purpose: System configuration and preferences

Key Entities:

1. System Configuration System-wide settings: - Key-value pairs - Setting types: - String - Integer - Boolean - JSON - File Path - Categories (general, email, SMS, security, etc.) - Public/private flags - Editable flags - Modified by tracking

2. User Settings User-specific preferences: - Email notifications - SMS notifications - Dashboard layout (JSON) - Theme (light/dark) - Language (English/Swahili) - Timezone (default: Africa/Nairobi) - Two-factor authentication - Last password change date

3. System Audit Log Comprehensive activity logging: - User and action type - Model name and object ID - Request information: - IP address - User agent - Request path - Request method - Change details (JSON)

- Success/error status - Timestamp indexing

4. System Alert System-wide notifications: - Title and message - Alert type: - Information - Warning - Error - Maintenance - Security - Alert scope: - System Wide - Role Specific - User Specific - Display settings: - Active status - Show until (expiration) - Dismissible flag - Targeting: - Target roles (JSON list) - Target users (many-to-many)

5. User Alert Dismissal Track dismissed alerts per user

6. System Backup Backup tracking: - Backup type: - Full Backup - Incremental Backup - Database Only - Media Files Only - Status: - Pending - Running - Completed - Failed - File path and size - Duration calculation - Started by - Timestamps - Error logging

Settings Features:

Configuration Management: - Centralized settings - Type-safe value storage - Category organization - Change tracking

User Preferences: - Personalized experience - Notification control - UI customization - Security settings

Audit Trail: - Complete activity logging - User action tracking - IP address logging - Change history

Alert System: - Targeted notifications - Role-based alerts - Dismissible messages - Expiration dates

Backup Management: - Scheduled backups - Manual backups - Backup restoration (conceptual) - Storage management

Key URLs:

- `/settings/` - Settings home
- `/settings/system/` - System configuration
- `/settings/user/` - User preferences
- `/settings/audit/` - Audit log
- `/settings/alerts/` - System alerts
- `/settings/backup/` - Backup management

How to Use:

Configuring System Settings (ICT Admin): 1. Navigate to Settings → System Configuration 2. Browse settings by category 3. Select setting to edit 4. Enter new value (respecting type) 5. Save changes 6. System logs change in audit trail

Managing User Preferences: 1. Navigate to Settings → User Preferences 2. Configure notifications: - Email notifications (on/off) - SMS notifications (on/off) 3. Customize dashboard layout 4. Select theme (light/dark) 5. Choose language 6. Set timezone 7. Enable/disable two-factor authentication 8. Save preferences

Viewing Audit Log: 1. Navigate to Settings → Audit Log 2. Filter by: - User - Action type - Date range - Model name 3. View detailed activity log 4. Export for analysis

Creating System Alert (ICT Admin): 1. Navigate to Settings → Alerts 2. Click "Create Alert" 3. Enter alert details: - Title and message - Alert type - Scope (system/role/user) 4. Set targeting: - If role-specific: select roles - If user-specific: select users 5. Set display settings: - Expiration date - Dismissible (yes/no) 6. Activate alert 7. Alert appears for targeted users

Managing Backups: 1. Navigate to Settings → Backup 2. View existing backups 3. Create new backup: - Select backup type - Add notes - Initiate backup 4. Monitor backup progress 5. View completed backups 6. Download backup files (if needed)

4. Step-by-Step User Guides

4.1 Complete Household Enrollment Process

Scenario: Enroll a new household in the UPG program

Steps:

Initial Household Registration

- Fill in household head information: First name, middle name, last name
- Gender and date of birth
- National ID number
- Phone number

- Fill in geographic information: Select county
- Select sub-county
- Select village
- Optional: Constituency, district, division, location

- Enter socio-economic data: Monthly income
- Assets (JSON format)
- Electricity access
- Clean water access
- Location type (rural/urban/remote)

- Save household

Add Household Members

- Enter member details: Name (or first, middle, last)
- Gender and age
- Relationship to head
- Education level
- National ID or birth certificate

- Repeat for all household members
- Identify household head and mark appropriately

Run Eligibility Assessment

- System calculates: PPI score (if assessment data available)
- Income level eligibility

- Asset criteria
- Geographic eligibility

- View eligibility results
- System provides recommendation (eligible/not eligible)

Record Baseline PPI

- Click "Add PPI Assessment"
- Select "Baseline PPI"
- Enter assessment date
- Input PPI score (0-100)
- Save PPI record

Obtain Household Consent

- Update household record: Set "Consent Given" = Yes

- Save household

Enroll in Program

- Navigate to Households → Household Programs
- Click "Enroll in Program"
- Select program (e.g., UPG FY25C1)
- Assign mentor (if known)
- Set enrollment date
- Status: "Enrolled"
- Save enrollment

Initialize UPG Milestones

- Open household program enrollment
- Click "Initialize Milestones"
- System creates 12 monthly milestones
- Set target dates for each milestone
- Save milestones

Assign to Training

- Navigate to Training module
- Select appropriate training module
- Click "Enroll Households"
- Find and select household
- Confirm enrollment
- System checks training capacity (max 25)

Result: Household is fully enrolled, eligible, consented, and assigned to training with milestone tracking activated.

4.2 Complete Training Module Delivery

Scenario: Mentor conducts and tracks a complete training module

Steps:

Phase 1: Training Preparation

View Assigned Training

- Review: Training name and module number
- Training location and dates
- Enrolled households (list)
- Training materials/topics

Review Enrolled Households

- View list of enrolled households
- Note: Maximum 25 households per training
- Check household details
- Plan logistics

Send Training Reminders

- For each household: Select household
- Nudge type: "Training Reminder"
- Set call date/time
- Record call duration
- Mark successful contact
- Add notes (e.g., confirmed attendance)

- Repeat for all households

Phase 2: Training Delivery

Conduct Training Session

- Physical training session at specified location
- Deliver training content
- Note attendees
- Track session duration

Mark Attendance

- For each household: Check "Present" or leave unchecked for "Absent"

- System records: Attendance status
- Marked by (mentor)
- Timestamp

- Save attendance

Phase 3: Post-Training Follow-up

Record Mentoring Visits

- Add detailed notes: What was discussed
- Household progress
- Challenges identified
- Next steps

- Save visit

Follow-up Phone Calls

- For households not visited or needing additional support: Add phone nudge
- Nudge type: "Follow-up Call"
- Record call details
- Document support provided

Update Training Status

- Once all sessions completed
- Navigate to training detail
- Update status from "Active" to "Completed"
- Save training

Phase 4: Reporting

Submit Mentoring Report

- Fill in statistics: Households visited: [count]
- Phone nudges made: [count]
- Trainings conducted: 1
- New households enrolled: [count]

- Write narrative report: Key activities: "Conducted [Training Name] for 23 households"
- "Completed 15 follow-up visits"
- "Made 20 phone calls for training reminders"

- Challenges faced: "5 households had transportation issues"
- "2 households needed additional time for business plan"

- Successes achieved: "92% attendance rate"
- "All attending households completed business plans"

- Next period plans: "Support households in SB Grant applications"
- "Form business groups"

- Submit report

Update Household Milestones

- Update appropriate milestone: Example: "Month 1 - PPI Assessment & Business Training Start"
- Set status: "Completed"
- Set completion date
- Add notes

- Save milestone

Result: Training module delivered, attendance tracked, follow-up conducted, and reporting completed.

4.3 Business Group Formation and SB Grant Application

Scenario: Form a business group and apply for Seed Business (SB) Grant

Steps:

Phase 1: Business Group Formation

Identify Participants

- Verify all households: Completed required training
- Are active in program
- Have given consent

Create Business Group

- Fill in group details: Group name (e.g., "Makutano Maize Growers")
- Select program (e.g., UPG FY25C1)
- Business type: Select category (Crop, Retail, Service, Livestock, Skill)
- Business type detail: (e.g., "Maize farming", "Barber shop")
- Group size: 3 (adjust as needed)
- Formation date: [today's date]
- Current business health: "Yellow" (Fair - just starting)
- Participation status: "Active"

- Save business group

Add Group Members

- For first household: Select household
- Role: "Leader"
- Joined date: [formation date]
- Is active: Yes

- Save

- For second household: Select household
- Role: "Treasurer"
- Joined date: [formation date]
- Is active: Yes
- Save

- For third household: Select household
- Role: "Secretary"
- Joined date: [formation date]
- Is active: Yes
- Save

- Verify all members added

Update Household Milestones

- For each member household: Navigate to Household → UPG Milestones
- Update "Month 2 - Business Group Formation"
- Status: "Completed"
- Completion date: [formation date]
- Notes: "Member of [Group Name]"
- Save

Phase 2: Business Plan Development

Develop Business Plan with Group

- Discuss and document: Business description
- Products/services to be offered
- Target market
- Startup costs (itemized)
- Projected monthly income
- Monthly expenses
- First 6-month projections

- Review and refine plan with group
- Group approves final plan

Update Milestone

- For each member household: Update "Month 3 - Business Plan Development"
- Status: "Completed"
- Completion date: [today's date]
- Save

Phase 3: SB Grant Application

Prepare SB Grant Application

- Fill in application: Select program
- Select business group
- Submitted by: [current user]
- Business plan: [paste full business plan]
- Projected income: [amount in KES]
- Startup costs: [amount in KES]
- Monthly expenses: [amount in KES]

- System auto-calculates grant amount: Base: 15,000 KES
- Group size factor: [calculated]
- Business type factor: [calculated]
- Location factor: [calculated]
- Performance factor: [calculated]
- Calculated grant amount: [shown]

- Review calculation
- If needed, admin can adjust final grant amount
- Leader name: [from member list]
- Treasurer name: [from member list]
- Secretary name: [from member list]
- Save application

Submit Application

- Review all details
- Confirm accuracy
- Click "Submit Application"
- Status changes to "Pending"
- Application enters review queue

Update Milestone

- For each member household: Update "Month 4 - SB Grant Application"
- Status: "Completed"
- Completion date: [today's date]
- Save

Phase 4: Application Review and Approval

Review Application (M&E Staff or County Director)

- Review all details: Business plan
- Financial projections
- Group composition

- Training completion

- Verify eligibility: All members completed training
- Business plan is realistic
- Financials are reasonable

- Add review notes
- Assign review score (0-100)
- Change status to "Under Review"
- Save

Approve Application (County Executive or Authorized Approver)

- Review: Application details
- Review notes and score

- Make decision: If approved: Confirm final grant amount
- Add approval notes
- Set approval date
- Change status to "Approved"

- If rejected: Add rejection reason
- Change status to "Rejected"

- Save decision
- System notifies applicant

Phase 5: Grant Disbursement

Disburse Funds

- Enter disbursement details: Disbursement date: [today's date]
- Amount: [full or partial amount]
- Method: [Bank Transfer, Mobile Money, Cash, or Check]
- Reference number: [transaction ID]
- Recipient name: [Leader name]
- Recipient contact: [Leader phone]

- Add disbursement notes
- Confirm disbursement
- Status changes to "Disbursed"
- Disbursement status: "Fully Disbursed" (if full amount)
- System records transaction

Update Milestone

- For each member household: Update "Month 5 - SB Grant Disbursement"
- Status: "Completed"

- Completion date: [disbursement date]
- Notes: "Grant amount: [amount] KES"
- Save

Notify Business Group

- Remind about: Proper fund utilization
- Record keeping
- Business launch timeline
- Next milestone: "Month 6 - Business Operations Start"

Result: Business group formed, business plan developed, SB Grant applied for, approved, and disbursed. Ready to launch business.

4.4 Savings Group Setup and Tracking

Scenario: Form a savings group and track monthly savings

Steps:

Phase 1: Savings Group Formation

Identify Potential Members

- Can include: Individual households
- Entire business groups

- Members should be: In same geographic area
- Able to meet regularly
- Committed to savings

Create Savings Group

- Fill in details: Group name (e.g., "Kapenguria Women's Savings Group")
- Target members: 25
- Formation date: [today's date]
- Meeting day: "Every Tuesday"
- Meeting location: "Kapenguria Community Center"
- Savings frequency: "Weekly"
- Is active: Yes

- Save savings group

Link Business Groups (Optional)

- If entire business groups are joining: Click "Link Business Groups"
- Select business group(s)
- All business group members automatically become savings group members

- Save

Add Individual Members

- For each individual household: Select household
- Role: "Chairperson", "Secretary", "Treasurer", or "Member"
- Joined date: [formation date]
- Total savings: 0 (will be updated as savings recorded)
- Is active: Yes
- Save

- Ensure key roles filled: 1 Chairperson
- 1 Secretary
- 1 Treasurer
- Remaining members

Initial Meeting

- Explain: Savings rules
- Meeting schedule
- Contribution amounts
- Withdrawal policies

- Elect/confirm leadership
- Collect initial savings (if any)

Phase 2: Regular Savings Tracking

Weekly Savings Recording

- For each member who saved: Click "Add Savings Record"
- Select BSG
- Select member (household)
- Enter amount: [amount in KES]
- Savings date: [meeting date]
- Recorded by: [current user]
- Add notes (optional): "Week 1 contribution"
- Save record

- System automatically: Updates member's total savings
- Updates group's savings to date

Monthly Progress Survey

- Fill in survey: BSG: [select group]
- Survey date: [today's date]
- Saving last month: [total saved in past month]

- Month recorded: [month/year]
- Attendance this meeting: [number of members present]
- Surveyor: [current user]

- Save survey

Phase 3: Monitoring and Support

Track Member Participation

- Identify: Regular savers
- Inconsistent savers
- Non-participating members

- Plan interventions: Phone calls to remind
- Home visits for challenges
- Group encouragement

Update Household Milestones

- For UPG program households: Navigate to Household → UPG Milestones
- Update "Month 8 - Business Savings Group Formation"
- Status: "Completed"
- Completion date: [formation date]
- Notes: "Member of [Savings Group Name]"
- Save

Regular Reporting

- Monthly reports to show: Total group savings
- Number of active members
- Savings trends
- Member participation rates

- Use for M&E and program evaluation

Phase 4: Long-term Tracking

Quarterly Review

- Calculate: Average monthly savings per member
- Group growth rate
- Member retention rate

- Identify successful patterns
- Address challenges

Annual Assessment

- At end of first year: Total group savings accumulated
- Member graduation from ultra-poor status
- Impact on household income
- Sustainability assessment

- Report to program management

Result: Savings group formed, regular savings tracked, monthly progress monitored, and member participation documented.

4.5 PR Grant Application Process

Scenario: Business group applies for Performance Recognition (PR) Grant after successfully utilizing SB Grant

Steps:

Phase 1: Prerequisites Check

Verify SB Grant Completion

- Check SB Grant status: Must be "Disbursed"
- Must have utilization report

- Verify business operations: Business has been running for at least 6 months
- Regular business activities

Complete SB Grant Utilization Report

- Enter detailed report: How grant was utilized (itemized)
- Equipment/inventory purchased
- Business setup completed
- Challenges encountered
- Outcomes achieved

- Upload receipts/photos (if available)
- Set utilization date
- Save report

- Required for PR Grant eligibility

Track Business Performance

- Record current performance: Grant value: [original SB Grant amount]
- Grant used: [amount utilized]
- Profit: [cumulative profit to date]
- Business inputs: [current inventory]
- Business inventory: [items in stock]

- Business cash: [cash on hand]

- Save survey
- Perform multiple surveys over 6-month period

Phase 2: Performance Assessment

Conduct Business Assessment

- Calculate business metrics: Total revenue generated
- Profit margins
- Inventory growth
- Cash flow status

- Assess business health: Update business health status if needed
- Should be "Green" (Good) or "Yellow" (Fair) for PR eligibility

- Document: Jobs created (number)
- Income increase for members
- Savings accumulated
- Community impact

Verify Savings Group Participation

- Review savings records: Regular contributions
- Cumulative savings

- Important for UPG graduation pathway

Phase 3: PR Grant Application

Initiate PR Grant Application

- System automatically: Links to SB Grant
- Checks eligibility
- Shows eligibility status

Fill PR Grant Application

- Enter performance data: Revenue generated: [total revenue since SB Grant]
- Jobs created: [number of jobs]
- Savings accumulated: [total savings]

- Write performance assessment: Detailed narrative of business performance
- Challenges overcome
- Community impact
- Growth trajectory

- Grant amount: [default 10,000 KES or as configured]

- Review all information
- Save application

Submit Application

- System checks: SB Grant is disbursed: ✓
- Utilization report exists: ✓
- Performance metrics present: ✓

- If all checks pass: Status changes to "Pending"
- Application enters review queue

- If checks fail: System shows error message
- Complete missing requirements

Update Milestone

- For each member household: Navigate to Household → UPG Milestones
- Update "Month 10 - PR Grant Application"
- Status: "Completed"
- Completion date: [today's date]
- Save

Phase 4: Review and Assessment

Eligibility Assessment (M&E Staff)

- System verifies: SB Grant successfully completed
- Utilization report submitted
- Business metrics meet minimum standards
- Training requirements met
- Savings group participation (for UPG)

- Review business performance: Revenue trends
- Profit generation
- Jobs created
- Savings patterns

- Assign performance rating: Excellent Performance (90-100)
- Good Performance (70-89)
- Satisfactory Performance (60-69)
- Poor Performance (<60)

- If eligible: Status: "Eligible" → "Under Review"

- If not eligible: Status: "Not Eligible Yet"
- Provide feedback on what's needed

- Save assessment

Peer Review (Optional)

- Additional review by Field Associate or Program Manager
- Verify performance metrics
- Add review notes
- Confirm eligibility decision

Phase 5: Approval

- Review all documentation: Application details
- Performance assessment
- Performance score and rating
- Business metrics

- Consider: Business sustainability
- Community impact
- Growth potential
- Program budget availability

- Make decision: If approved: Confirm grant amount
- Add approval notes
- Set approval date
- Status: "Approved"

- If rejected: Provide detailed rejection reason
- Suggest improvements
- Status: "Rejected"

- Save decision
- System notifies applicant

Phase 6: Disbursement

Disburse PR Grant

- Enter disbursement details: Disbursement date: [today's date]
- Amount: [grant amount]
- Method: [Bank Transfer, Mobile Money, Cash, or Check]
- Reference number: [transaction ID]
- Recipient: [business group leader]
- Contact: [leader phone number]

- Add disbursement notes
- Confirm disbursement
- Status changes to "Disbursed"

- System records transaction

Update Milestone

- For each member household: Navigate to Household → UPG Milestones
- Check if "Month 10 - PR Grant Application" completed
- Update "Month 11 - Final Business Assessment"
- Status: "Completed" (or "In Progress")
- Add notes about PR Grant disbursement
- Save

Post-Disbursement Follow-up

- Discuss: PR Grant utilization plan
- Business expansion goals
- Sustainability planning
- Graduation pathway

- Set follow-up dates

Phase 7: Final Assessment (Leading to Graduation)

Track PR Grant Utilization

- Monitor business over 2-3 months
- Record progress surveys
- Update business health status
- Prepare for graduation assessment

Graduation Assessment

- Conduct comprehensive assessment: Income increase verification
- Asset accumulation
- Business sustainability
- Savings group participation
- Community integration

- Status: "Completed"
- Completion date: [today's date]

- Update household program status: From "Active" to "Graduated"
- Set graduation date
- Add graduation notes

Result: PR Grant successfully applied for, assessed, approved, and disbursed based on business performance. Business group progresses toward graduation.

5. Troubleshooting

5.1 Common Login Issues

Problem: Cannot log in / "Invalid username or password" error

Solutions: 1. Verify username (case-sensitive) 2. Verify password (case-sensitive) 3. Check Caps Lock key 4. Use "Forgot Password" if password forgotten 5. Contact ICT Administrator if account locked

Problem: Password reset email not received

Solutions: 1. Check spam/junk folder 2. Verify correct email address registered 3. Wait 5-10 minutes for email delivery 4. Contact ICT Administrator for manual reset

Problem: Session timeout / Automatically logged out

Solutions: 1. Sessions expire after 1 hour of inactivity (configured in settings) 2. Save work frequently 3. Log back in 4. Contact ICT Admin if timeout too short

5.2 Data Entry Issues

Problem: "Permission denied" when trying to add/edit data

Solutions: 1. Verify your role has permission for this action 2. Check if you're assigned to the specific data (e.g., mentor can only edit assigned households) 3. Contact supervisor if permission needed

Problem: Cannot save form / Validation errors

Solutions: 1. Check all required fields (marked with asterisk *) 2. Verify data format (dates, numbers, emails) 3. Check field length limits 4. Review error messages for specific issues

Problem: Duplicate entry errors

Solutions: 1. System prevents duplicate entries (e.g., same household in business group) 2. Search for existing record first 3. Update existing record instead of creating new one 4. Contact ICT Admin if legitimate duplicate needed

5.3 Training Module Issues

Problem: Cannot enroll household in training / "Training full" error

Solutions: 1. Training has maximum capacity (default 25 households) 2. Check available slots 3. Create additional training session 4. Or remove inactive households from current training

Problem: Household already enrolled in another training

Solutions: 1. System enforces one household per training 2. Complete or withdraw household from current training 3. Then enroll in new training

Problem: Cannot mark attendance

Solutions: 1. Verify training date has passed or is today 2. Check if households are enrolled 3. Verify mentor assignment 4. Ensure training status is "Active" or "Completed"

5.4 Grant Application Issues

Problem: SB Grant auto-calculation seems incorrect

Solutions: 1. Review calculation factors: - Group size - Business type - Location - Training performance 2. Verify business group has members added 3. Check training completion records 4. Contact M&E Staff for calculation review 5. Admin can manually adjust final amount if needed

Problem: PR Grant application rejected / "Not eligible"

Solutions: 1. Verify SB Grant status is "Disbursed" 2. Ensure SB Grant utilization report completed 3. Check business performance metrics 4. Review training completion rates 5. Verify savings group participation 6. Address feedback from eligibility assessment

Problem: Cannot submit grant application

Solutions: 1. Check all required fields filled 2. Verify business plan entered 3. Ensure financial projections realistic 4. Confirm applicant type selected (household, business group, or savings group) 5. Review any validation error messages

5.5 Reporting Issues

Problem: Report shows no data / empty results

Solutions: 1. Check date range filters 2. Verify geographic filters 3. Ensure data exists for selected criteria 4. Try broader filters 5. Contact M&E Staff if data expected but not showing

Problem: Dashboard statistics not updating

Solutions: 1. Refresh browser page (F5 or Ctrl+R) 2. Clear browser cache 3. Log out and log back in 4. Check if recent data entry was saved successfully

Problem: Cannot export report

Solutions: 1. Verify export permission for your role 2. Check browser popup blocker settings 3. Try different export format (CSV instead of Excel) 4. Contact ICT Admin if persistent

5.6 Forms Module Issues

Problem: Cannot access assigned form

Solutions: 1. Verify form assignment is "Active" 2. Check assignment hasn't expired (due date) 3. Confirm you're the assignee (mentor or field associate) 4. Check if field associate reassigned form 5. Contact M&E Staff who assigned form

Problem: Form submission fails

Solutions: 1. Check all required fields completed 2. Verify photo evidence uploaded (if required) 3. Ensure GPS location captured (if required) 4. Check internet connection 5. Save as draft if submission failing 6. Try submitting again later

Problem: Photo upload fails

Solutions: 1. Check photo file size (max 5MB) 2. Verify photo format (JPG, PNG) 3. Check device storage space 4. Try compressing photo 5. Check internet connection

5.7 System Performance Issues

Problem: System running slowly

Solutions: 1. Check internet connection speed 2. Close unnecessary browser tabs 3. Clear browser cache and cookies 4. Try different browser (Chrome, Firefox, Edge) 5. Restart browser 6. Contact ICT Admin if persistent

Problem: Page not loading / timeout errors

Solutions: 1. Check internet connection 2. Refresh page 3. Clear browser cache 4. Try accessing from different device 5. Check if system maintenance in progress 6. Contact ICT Admin

Problem: Changes not saving / "Network error"

Solutions: 1. Check internet connection 2. Verify no firewall blocking 3. Try saving again 4. Copy unsaved data to clipboard 5. Refresh page and try again 6. Contact ICT Admin if persistent

5.8 Getting Help

Support Channels:

- **User Documentation**: This manual and system help pages
- **Supervisor/Manager**: First point of contact for operational questions
- **M&E Staff**: For data collection, forms, and reporting questions
- **ICT Administrator**: For technical issues, permissions, and system errors
- **System Alerts**: Check dashboard for system-wide notifications

Reporting Issues: 1. Describe the problem clearly 2. Note any error messages (screenshot if possible) 3. Specify what you were trying to do 4. Include your username and role 5. Note date and time of issue

Emergency Contacts: - ICT Administrator: [contact information] - M&E Staff: [contact information] - Program Manager: [contact information]

Part 2: Complete Source Code Appendix

6. Appendix: Complete Source Code

This section contains the complete source code for all major files in the UPG System. The code is organized by module for easy reference.

6.1 Project Settings

File: upg_system/settings.py

```
"""
Django settings for UPG System project.

Generated for Village Enterprise Ultra-Poor Graduation Management System.
For local development and testing.
"""

from pathlib import Path
import os

# Build paths inside the project like this: BASE_DIR / 'subdir'.
BASE_DIR = Path(__file__).resolve().parent.parent


# Quick-start development settings - unsuitable for production
SECRET_KEY = 'django-insecure-upg-system-dev-key-change-in-production-123456789'

# SECURITY WARNING: don't run with debug turned on in production!
DEBUG = True

ALLOWED_HOSTS = ['localhost', '127.0.0.1', '0.0.0.0']


# Application definition
DJANGO_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
]

THIRD_PARTY_APPS = [
    'crispy_forms',
    'crispy_bootstrap5',
]

LOCAL_APPS = [
    'accounts',
    'core',
    'households',
    'business_groups',
    'savings_groups',
    'training',
    'surveys',
    'reports',
    'programs',
    'dashboard',
    'grants',
    'upg_grants',  # UPG-specific grant management
    'forms',  # Dynamic forms system
    'settings_module',
]

INSTALLED_APPS = DJANGO_APPS + THIRD_PARTY_APPS + LOCAL_APPS

MIDDLEWARE = [
    'django.middleware.security.SecurityMiddleware',
    'django.contrib.sessions.middleware.SessionMiddleware',
    'django.middleware.common.CommonMiddleware',
    'django.middleware.csrf.CsrfViewMiddleware',
    'django.contrib.auth.middleware.AuthenticationMiddleware',
    'django.contrib.messages.middleware.MessageMiddleware',
    'django.middleware.clickjacking.XFrameOptionsMiddleware',
    'core.middleware.AuditLogMiddleware',
]

ROOT_URLCONF = 'upg_system.urls'
TEMPLATES = [
```

```python
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [BASE_DIR / 'templates'],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
                'django.template.context_processors.debug',
                'django.template.context_processors.request',
                'django.contrib.auth.context_processors.auth',
                'django.contrib.messages.context_processors.messages',
                'core.context_processors.user_permissions',
                'core.context_processors.system_alerts',
            ],
        },
    },
]

WSGI_APPLICATION = 'upg_system.wsgi.application'


# Database Configuration

# MySQL Configuration (Active)
DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.mysql',
        'NAME': 'upg_management_system',
        'USER': 'root',
        'PASSWORD': '',  # XAMPP default (no password)
        'HOST': 'localhost',
        'PORT': '3306',
        'OPTIONS': {
            'init_command': "SET sql_mode='STRICT_TRANS_TABLES'",
            'charset': 'utf8mb4',
        },
        'TEST': {
            'CHARSET': 'utf8mb4',
            'COLLATION': 'utf8mb4_unicode_ci',
        },
    }
}

# SQLite Configuration (Backup - data migrated to MySQL)
# DATABASES = {
#     'default': {
#         'ENGINE': 'django.db.backends.sqlite3',
#         'NAME': BASE_DIR / 'db.sqlite3',
#     }
# }


# Password validation
AUTH_PASSWORD_VALIDATORS = [
    {
        'NAME': 'django.contrib.auth.password_validation.UserAttributeSimilarityValidat...
    },
    {
        'NAME': 'django.contrib.auth.password_validation.MinimumLengthValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.CommonPasswordValidator',
    },
    {
        'NAME': 'django.contrib.auth.password_validation.NumericPasswordValidator',
    },
]


# Internationalization
LANGUAGE_CODE = 'en-us'
TIME_ZONE = 'Africa/Nairobi'
USE_I18N = True
USE_TZ = True


# Static files (CSS, JavaScript, Images)
STATIC_URL = '/static/'
STATICFILES_DIRS = [
```

```
    BASE_DIR / 'static',
]
STATIC_ROOT = BASE_DIR / 'staticfiles'

# Media files
MEDIA_URL = '/media/'
MEDIA_ROOT = BASE_DIR / 'media'

# Default primary key field type
DEFAULT_AUTO_FIELD = 'django.db.models.BigAutoField'

# Custom User Model
AUTH_USER_MODEL = 'accounts.User'

# Crispy Forms Configuration
CRISPY_ALLOWED_TEMPLATE_PACKS = "bootstrap5"
CRISPY_TEMPLATE_PACK = "bootstrap5"

# Login URLs
LOGIN_URL = '/accounts/login/'
LOGIN_REDIRECT_URL = '/'
LOGOUT_REDIRECT_URL = '/accounts/login/'

# Email Configuration (for development)
EMAIL_BACKEND = 'django.core.mail.backends.console.EmailBackend'

# SMS Configuration
# Africa's Talking API (Primary SMS provider for Kenya)
AFRICAS_TALKING_API_KEY = ''  # Set in production
AFRICAS_TALKING_USERNAME = 'sandbox'  # Change to production username
SMS_SENDER_ID = 'UPG_SYS'

# Twilio API (Fallback SMS provider)
TWILIO_ACCOUNT_SID = ''  # Set in production
TWILIO_AUTH_TOKEN = ''   # Set in production
TWILIO_PHONE_NUMBER = '' # Set in production

# SMS Settings
SMS_ENABLED = True
SMS_BACKEND = 'core.sms.SMSService'  # Can be changed for testing

# Session Configuration
SESSION_COOKIE_AGE = 3600  # 1 hour
SESSION_EXPIRE_AT_BROWSER_CLOSE = True

# Security Settings for Development
SECURE_BROWSER_XSS_FILTER = True
SECURE_CONTENT_TYPE_NOSNIFF = True

# UPG System Specific Settings
UPG_SYSTEM_VERSION = '1.0.0'
UPG_DEFAULT_COUNTRY = 'Kenya'
UPG_DEFAULT_CURRENCY = 'KES'

# Database compatibility settings
import sys
if 'migrate' in sys.argv or 'makemigrations' in sys.argv:
    # Only apply MySQL/MariaDB settings if using MySQL backend
    if DATABASES['default']['ENGINE'] in ['django.db.backends.mysql', 'django.db.backen...
        if 'OPTIONS' not in DATABASES['default']:
            DATABASES['default']['OPTIONS'] = {}
        DATABASES['default']['OPTIONS']['init_command'] = (
            "SET sql_mode='STRICT_TRANS_TABLES'; "
            "SET SESSION innodb_strict_mode=1; "
        )

# Pagination
ITEMS_PER_PAGE = 25

# File Upload Settings
FILE_UPLOAD_MAX_MEMORY_SIZE = 5242880  # 5MB
DATA_UPLOAD_MAX_MEMORY_SIZE = 5242880  # 5MB
```

6.2 Project URLs

File: upg_system/urls.py

```python
"""
URL configuration for UPG System project.
"""
from django.contrib import admin
from django.urls import path, include
from django.conf import settings
from django.conf.urls.static import static
from django.contrib.auth import views as auth_views

urlpatterns = [
    # Admin
    path('admin/', admin.site.urls),

    # Authentication
    path('accounts/', include('accounts.urls')),

    # Main Dashboard
    path('', include('dashboard.urls')),

    # Core modules
    path('households/', include('households.urls')),
    path('business-groups/', include('business_groups.urls')),
    path('savings-groups/', include('savings_groups.urls')),
    path('training/', include('training.urls')),
    path('surveys/', include('surveys.urls')),
    path('reports/', include('reports.urls')),
    path('programs/', include('programs.urls')),
    path('grants/', include('grants.urls')),
    path('upg-grants/', include('upg_grants.urls')),
    path('settings/', include('settings_module.urls')),
    path('core/', include('core.urls')),
]

# Serve media files in development
if settings.DEBUG:
    urlpatterns += static(settings.MEDIA_URL, document_root=settings.MEDIA_ROOT)
    urlpatterns += static(settings.STATIC_URL, document_root=settings.STATIC_ROOT)

# Custom admin site headers
admin.site.site_header = "UPG Management System"
admin.site.site_title = "UPG Admin"
admin.site.index_title = "Ultra-Poor Graduation Management"
```

6.3 Accounts Module

File: accounts/models.py

````
---

#

---

# PART 2: COMPLETE SOURCE CODE APPENDIX


This section contains all 106 Python source code files from the UPG System.

---


## File: accounts\__init__.py

**Location:** `accounts\__init__.py`

```python
````
````

```
# Accounts App
```

Note: Full source code (106 files) is available in the markdown file. This PDF includes the first portion for reference.