

PROPERTY MAINTENANCE MANAGEMENT – FULL SYSTEM PROCESSES & FUNCTIONS

1. CORE PROCESSES

1.1 Property Registration Process

- Add property details (location, size, owner, building type).
- Upload utility information.
- Add inventory (appliances, structural items).
- Set maintenance intervals.

1.2 Issue Reporting Process

- Tenant request, system detection, inspection.
- Capture category, severity, photos, recommended action.

1.3 Maintenance Scheduling Process

- System auto-generates recurring tasks.
- Evaluate urgency, assign users, track deadlines.

1.4 Task Assignment & Execution Process

- Assign → notify → accept/reject → update progress → submit for approval.

1.5 Quality Control & Follow-Up

- QC checklists, cost logging, update next maintenance date.

2. SYSTEM FUNCTIONS

2.1 Property Functions

- Add/edit/delete properties.
- Upload documents.
- Auto-generate maintenance calendar.
- View history.

2.2 Task Management Functions

- Auto/manual task creation.
- Assign users, set due dates.
- Track progress and upload materials.
- Close or reopen tasks.

2.3 Team/User Management

- Create users with skill categories.
- Assign roles: Supervisor, Technician, Cleaner.
- Track efficiency.

2.4 Notifications & Alerts

- Task assigned, overdue, material shortages, emergency issues.

2.5 Inventory & Material Tracking

- Manage stock.
- Auto-deduct per task.
- Low stock alerts.

2.6 Reporting Functions

- Monthly cost reports.
- Most common issues.
- Staff performance.

3. TASK GENERATION LOGIC

3.1 Recurring Tasks

Examples:

- AC: Quarterly filter cleaning.
- Plumbing: Monthly leak checks.
- Electrical: Semi-annual panel tightening.

3.2 Conditional Tasks

Triggers:

- Sensor alerts.
- Tenant reports.
- Warranty expiry.

Logic example:

IF severity = high → assign immediately.

3.3 Manual Tasks

Supervisor adds tasks such as:

- Renovation.
- Painting.
- Emergency repairs.

4. TASK ASSIGNMENT WORKFLOW

Assignment rules:

- Based on skill category, availability, proximity, and priority.

Escalation Rules:

- Overdue tasks.
- Repeated rejections.
- Repeat of same issue.
- Tenant marks as unresolved.

Escalation Actions:

- Notify supervisor.
- Reassign.
- Increase priority.

5. DATABASE/TABLE STRUCTURE

5.1 Properties Table

- Property_ID, address, owner, maintenance interval, status.

5.2 User Table

- User_ID, role, skillset, availability, contact.

5.3 Task Table

- Task_ID, property_ID, category, description, priority, assigned_to, due_date, status, cost.

5.4 Materials Table

- Material_ID, stock, price, category.

6. SAMPLE TASK TEMPLATES

6.1 Preventive AC Service

- Clean filters.
- Check gas level.
- Test thermostat.
- Clear drain pipe.

6.2 Electrical Safety Audit

- Tighten DB.
- Inspect sockets.
- Test ELCB.
- Replace damaged wiring.

6.3 Plumbing Preventive Maintenance

- Check leaks.
- Pressure test.
- Inspect drainage.
- Clean aerators.