Residential Maintenance Manager
User Manual
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1. Overview

The Residential Maintenance Manager (RMMS) is a JavaFX desktop application that manages maintenance re
It supports four main roles:

- Tenant
- Maintenance Staff
- Building Manager
- Admin

This manual covers how to run the app in IntelliJ, how to configure email, how to log in to the demo admin acco

2. System Requirements

- Java 21
- IntelliJ IDEA (Community or Ultimate)
- Git and a cloned copy of the project
- Internet access if you want email notifications to work
- A Google account with an App Password (for SMTP email)

3. Running the Application in IntelliJ

3.1 Open the project

1. Start IntelliJ IDEA.
2. Select File → Open…
3. Choose the project folder and open it.
4. Let IntelliJ finish indexing and building.

3.2 Use the stored run configuration

The project includes a preconfigured run configuration named "RMMS JavaFX Run".

1. In the top right of IntelliJ, open the Run configuration dropdown.
2. Select "RMMS JavaFX Run".
3. Click Run ■■.

This configuration:

- Sets the required JavaFX module path.
- Runs with Java 21.
- Fixes the “JavaFX runtime components are missing” error.

If the app launches to the Login screen, your run configuration is correct.

4. Email Setup (SMTP Environment Variables)

To enable email notifications (for example, new request emails or status updates), configure Environment varial

In IntelliJ:

1. Go to Run → Edit Configurations…
2. Select "RMMS JavaFX Run".
3. Find the Environment variables field.
4. Enter a single line in this format:

SMTP_HOST=smtp.gmail.com;SMTP_PORT=587;SMTP_USERNAME=you@gmail.com;SMTP_PASSWORD=

Where:

- SMTP_USERNAME – your Gmail address.
- SMTP_PASSWORD – your 16-character Google App Password (displayed with spaces for readability, but sto
- SMTP_FROM – display name and email in angle brackets.

Notes:

- You must create a Google App Password in your Google Account and use that value for SMTP_PASSWORD.
- Without these variables, the app will still run, but email features will either fail or not send messages.

5. Login Screen

The Login screen is the entry point for all roles.

Main elements:

- App title and tagline at the top.
- Email / Username field.
- Password field.
- Login button.
- Optional error message area below the form.

Basic usage:

1. Enter your assigned username or email.
2. Enter your password.
3. Click Login.

On success, you are routed to the dashboard that matches your role:

- Tenant → Tenant Dashboard
- Maintenance Staff → Staff Dashboard
- Building Manager → Manager Dashboard
- Admin → Admin Dashboard

If login fails, an error message is shown. Check spelling and case. If you still cannot log in, contact an Admin.

5.1 Demo Admin Account

For the demo environment, a default admin account is seeded so you can create additional users directly in the

- Username: admin1
- Password: pass123

Workflow:

1. Log in with admin1 / pass123.
2. Go to the Admin Dashboard.
3. Use the user management section to create Tenant, Staff, Manager, or additional Admin accounts.

For any real deployment, you should change or remove this default account.

6. Tenant Dashboard

The Tenant Dashboard is for residents who file and track maintenance requests.

Typical layout:

- Header with user info and logout option.
- Stats area showing counts, such as:
  - Open requests
  - In progress
  - Resolved or closed
- Filter / search controls, for example:
  - Status dropdown (All, Open, In Progress, Completed)
  - Category or date filters
- Requests table listing the tenant’s own maintenance requests.

Common actions:

- Create new request
  - Click a button such as "New Request" or "Submit Maintenance Request".
  - Fill in fields such as:
    - Category (plumbing, electrical, etc.)
    - Priority
    - Description of the issue
    - Optional image upload if enabled
  - Submit the form. A new row appears in the table.

- View request details
  - Select a row in the table.
  - Use a "View" or "Details" button if present.
  - Review full information including timestamps, comments, and status history.

- Track status
  - Watch the Status and Updated columns for progress (for example, Open → In Progress → Completed).

Tenants cannot assign staff or edit system-wide settings. They only see their own tickets.

7. Staff Dashboard

The Staff Dashboard is for maintenance workers handling assigned requests.

Layout:

- Header and logout.
- Workload summary, such as:
  - Number of active tickets
  - Recently completed tickets
- Filters to view:
  - All assigned tickets
  - Only open or in-progress tickets
- Requests table for tickets assigned to this staff member.

Common actions:

- View assigned requests
  - The table shows requests routed to the logged-in staff member.

- Update request status
  - Select a ticket.
  - Change status from Open to In Progress or Completed using an action button or dropdown.
  - Save the update.
  - Status and last updated time are refreshed for all roles.

- Add notes or comments (if implemented)
  - Use a notes or comments section to document what was done.

The system may enforce a maximum active workload per staff member. If that limit is reached, managers canno

8. Manager Dashboard

The Manager Dashboard is for building managers who oversee staff and request flow.

Layout:

- Stats strip summarizing:
  - Total open requests
  - Average resolution time
  - Unassigned requests
- Filters:
  - By status, category, building, or staff member.
- Requests table for all tenants in the manager’s building(s).

Key actions:

- Assign requests to staff

  - Select an unassigned request.
  - Use an Assign button or dropdown to choose a staff member.
  - The system may block assignment if the staff member already has the maximum allowed active tickets.

- Reassign or rebalance workload
  - Move tickets from overloaded staff to others.

- Monitor performance
  - Use status counts and timestamps to identify slow-moving tickets.

Managers cannot change global system settings but control the distribution and flow of work.

9. Admin Dashboard

The Admin Dashboard is for system administrators.

Layout:

- System-wide stats:
  - Total users
  - Total requests
  - Open vs closed distribution
- User management table:
  - User ID, name, email, role (Tenant, Staff, Manager, Admin), status (active or not).
- Request overview for all buildings.

Key actions:

- Create users
  - Add new Tenants, Staff, Managers, or Admins.
  - Set initial credentials and role.

- Edit user accounts
  - Update names, email, phone, or role.
  - Activate or deactivate accounts.

- Global monitoring
  - View all requests and high-level system health.

Initial setup:

- Log in using the demo admin account (admin1 / pass123).
- Immediately create named Admin, Manager, Staff, and Tenant accounts for real use.
- For production, change the password for admin1 or remove that account after configuring permanent admins.

Some admin accounts may be seeded by the database initializer. Treat them as bootstrap accounts and secure

10. Troubleshooting

- App does not start, JavaFX error

  - Confirm you selected the "RMMS JavaFX Run" configuration.
  - Confirm Java 21 is configured for the project and for the run configuration.

- Blank window or UI not styled
  - Make sure resources and CSS are on the classpath.
  - Run from IntelliJ using the provided "RMMS JavaFX Run" configuration instead of launching random classes

- Email not sending
  - Check that all SMTP environment variables are set in the run configuration.
  - Confirm the Google App Password is correct and corresponds to the account in SMTP_USERNAME.
  - Confirm internet access.

- Login fails for a known user
  - Verify username and password, including case.
  - If using the demo admin, make sure you typed admin1 and pass123 exactly.
  - Ask an Admin (or use admin1) to confirm the account is active.