Sprint 2 Report – Smart First Aid Kit Management System (MVP)

# 1. Sprint Overview

Sprint 2 covered the period from September 18 to September 24, 2025. The main goal was to deliver the initial inventory management functionality, including CRUD operations for medicines, the first version of the dashboard, and basic validations.

# 2. Objectives

The objectives for Sprint 2 were:

- Full CRUD operations for medicines (create, read, update, delete).

- Initial dashboard showing the medicine inventory.

- Validations for mandatory fields and expiry dates.

- Inclusion of critical fields: trade name, generic name, strength, expiry date, quantity.

- Seeding the database with realistic sample data (Paracetamol, Ibuprofen, etc.).

# 3. Achievements

Sprint 2 successfully delivered the following:

✔ Full CRUD functionality implemented in Flask routes with SQLAlchemy integration.

✔ Backend validations added, ensuring expiry dates are future dates and quantities are non-negative.

✔ Bootstrap-based dashboard created (inventory.html), displaying all medicine fields with status badges.

✔ Database seeded with realistic data, including common medicines and supplies.

✔ System tested through Dockerized environment, Insomnia, and browser rendering.

# 4. Dashboard Example

Below is a placeholder for how the dashboard renders the inventory in Sprint 2:

A screenshot of a computer

AI-generated content may be incorrect.

# 5. Technical Notes

Key technologies and implementation details for Sprint 2:

- Backend: Flask with SQLAlchemy for ORM.

- Database: MySQL hosted on DigitalOcean with SSL connection.

- Frontend: Bootstrap templates served by Flask (base.html, inventory.html).

- Containerization: Docker and docker-compose with environment variables in .env.

- Testing tools: Insomnia for API endpoints, MySQL Workbench for DB validation.

# 6. Next Steps (Sprint 3)

The next sprint (Sept 25 – Oct 1, 2025) will focus on:

- Implementing alert generation logic (critical, preventive, informative).

- Visual alert indicators with color-coded badges and progress bars.

- Dashboard filtering and enhanced inventory management features.

- Basic threshold configuration per medicine.

# 7. Status

Sprint 2 has been successfully completed. The system now provides a functional dashboard and full CRUD for medicine management.