Intern Task Document – Revotic AI

Role:

Task: Build an **AI-Based Post Diagnosis Medicine Assistant**

Problem Statement:

- This AI-powered system would help patients manage their medications based on their health profile, diagnosis, and doctor's prescriptions.
- It would provide details like medicine names, dosage (in mg, gm, or spoons), alternatives, and safe usage instructions.
- The system would track medicine intake, send reminders, and help users follow their schedule properly.
- It could also warn about possible side effects (like allergies or high sugar/blood pressure) and suggest what to do in such cases.

Scope:

- This project focuses on post-diagnosis medical assistance, including:
- Alternative medicines and cost-effective options.
- Correct dosage recommendations (e.g., 200 mg).
- Side effect detection and safer alternative suggestions.
- User profiling with medical history tracking.
- Personalized medicine reminders and schedules.
- AI-powered best medicine combinations for better results.
- Alerts for harmful medicine interactions.

Motivation:

- Many users struggle with understanding prescribed medicines.
- Helps reduce unnecessary doctor visits for minor concerns.
- Improves medication adherence and safety.
- AI can provide quick and reliable post-diagnosis assistance

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Introduction:

- The AI Based Post-Diagnosis Medicine Assistant will support users after diagnosis by tracking their medication history, reminding them of medicine schedules, and suggesting alternatives if side effects occur. This system ensures safer medication use by offering guidelines, precautions, and dosage recommendations.

Objectives:

- Develop an AI-powered system for medicine guidance.
- Provide medicine reminders and safety alerts.
- Track user feedback on medicine effectiveness.
- Suggest alternative medicines based on user reactions.
- Ensure accurate and personalized dosage recommendations.

SE Methodology: (**Waterfall Model)**

- To ensure a structured and disciplined development process, our project follows the Classical **Waterfall Model**. This model divides the software development life cycle into well-defined, sequential phases. Each phase must be completed before moving on to the next to minimize risks and ensure clarity at every stage. For our AI-Based Post-Diagnosis Medicine Assistant, the process will work as follows:
- **Requirement Analysis:** Define functional and non-functional needs, including AI recommendations, reminders, medicine info, and data security standards.
- **System Design:** Create system architecture and design diagrams (use case, class, DFD).
- **Implementation:** Build AI for medicine tracking and suggestions.
- **Testing:** Validate AI recommendations for accuracy and safety.
- **Deployment & Maintenance:** Launch the system and collect user feedback.

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Requirement Analysis

Functional Requirements (FRs):

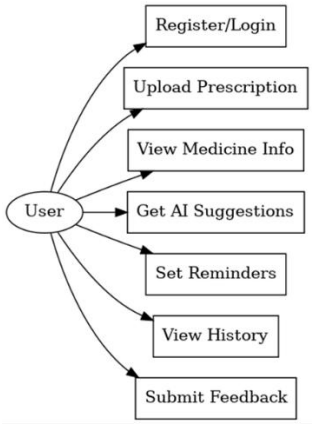
ID	Description
FR1	User can register and login
FR2	User uploads or inputs a prescription
FR3	System stores user health data and prescriptions
FR4	System displays medicine info (brand, generic, dosage)
FR5	AI recommends alternatives and alerts on interactions
FR6	User sets reminders and receives notifications
FR7	User submits feedback on medicine effects
FR8	System updates history and learns from data

NON-FUNCTIONAL REQUIREMENTS (NFRS):

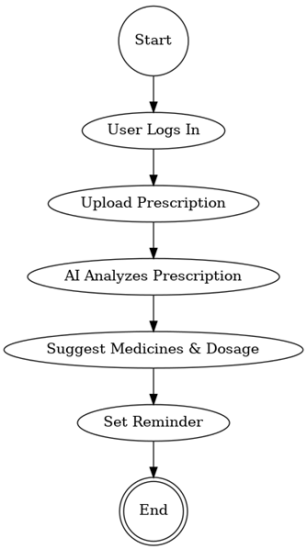
ID	Description
NFR1	System must respond within 3 seconds
NFR2	Interface must be mobile responsive
NFR3	User data must be encrypted and secure
NFR4	AI suggestions must have 80% accuracy or better
NFR5	System should support both web and Android platforms

System Design:

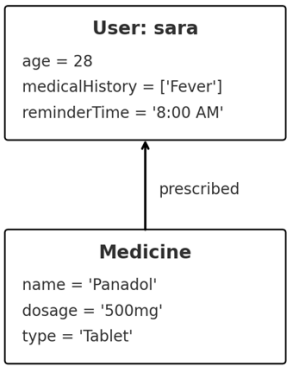
- **Use case diagram**



- **Activity diagram**

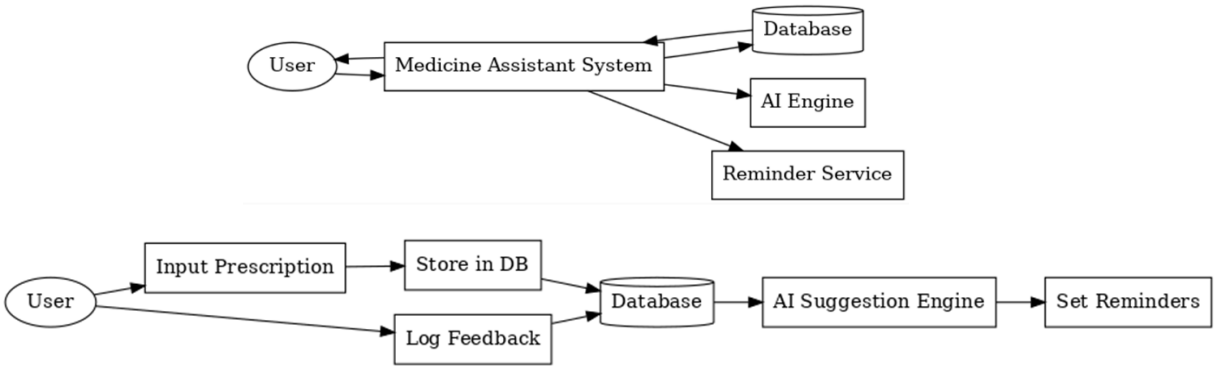


- **Object diagram**

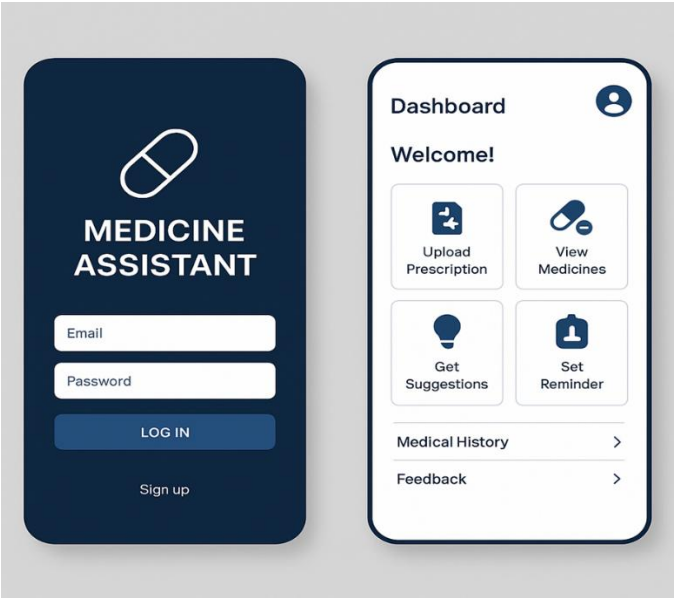


- **Sequence diagram**

- **Data flow diagram**



INTERFACE REFERENCE



Note: add User profiling with medical history tracking

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Project Tools and Resources

- Frontend: Flutter (for mobile and web application)
- Backend: Flutter/Django (API development)
- AI Model: TensorFlow/PyTorch (for machine learning)
- Natural Language Processing (NLP): for User Profiling
- Database: SQLite / PostgreSQL / Firebase

Note: you may choose the backend, AI model, and database as per your convenience, these are just the available options.

Deliverables

- **AI-based medicine guidance system**
- **Mobile App**
- **Web App**
- **documentation**