Business Use Case: MediConnect, an Integrated Medical Interaction Platform

This use case describes the end-to-end process of a medical visit, involving appointment scheduling, consultation, treatment prescription, lab testing, and follow-up—all coordinated through the MediConnect platform.

The goal is to facilitate a seamless and traceable medical consultation process that includes:

- Scheduling and confirming appointments.
- Conducting the consultation with medical staff.
- Prescribing and administering treatment.
- Requesting and processing lab tests.
- Delivering results and recommendations to the patient.
- Archiving all data for future reference.

This ensures better coordination, transparency, and patient satisfaction.

Primary Actors:

- Patient - Initiates the consultation request, receives treatment, accesses lab results, and provides feedback.
- Doctor
  Reviews and approves appointment requests, conducts the consultation, prescribes treatment and tests, and interprets lab results.
- Nurse
  Assists during the consultation, records vital signs, administers treatment, and validates clinical actions.
- Laboratory
  Receives test requests, processes biological samples, uploads results, and ensures timely delivery of data.
- MediConnect System
  Orchestrates the entire workflow, manages notifications, stores documents, and maintains medical history.

Prerequisites:
- The patient must have an active account and be logged into the platform.

- The doctor must have available time slots in their calendar.
- The laboratory must be integrated and operational within the system.
- A nurse must be assigned to the clinic and available during the consultation.

Main Event Flow:

1. Appointment Scheduling

- Patient logs into MediConnect and requests a consultation with a specific doctor.
- The system checks the doctor's availability and sends a request.
- The doctor approves the appointment.
- The patient receives a confirmation with date, time, and location.

2. Consultation

- Patient arrives at the clinic.
- Nurse confirms the patient's presence and records vital signs (e.g., blood pressure, temperature).
- Doctor examines the patient and updates the electronic medical record with observations.

3. Treatment & Lab Test Prescription

- Doctor prescribes medication and creates a lab test request.
- The system sends the test request to the selected laboratory.
- Patient is notified of the next steps (e.g., sample collection, medication schedule).

4. Treatment Administration

- Nurse administers treatment in the clinic if required.
- Patient receives reminders and instructions for home administration.
- System tracks progress and logs any reported side effects.

5. Lab Test Processing

- Laboratory receives and processes the samples.
- Results are uploaded to the system.
- Doctor reviews and interprets the results.
- Patient receives access to results and any additional recommendations.

6. Completion

- System generates a comprehensive visit report.
- Patient can rate the experience and provide feedback.
- All data is securely archived in the patient's medical history.

Alternative Flows:

- **Doctor rejects appointment** → Patient is notified and prompted to select another time.
- **Patient does not show up** → Appointment is automatically canceled and logged.
- **Lab cannot process test** → Request is redirected to another partner lab.

The app will feature a completed medical consultation with documented treatment and lab results.
- Centralized and accessible medical data for all actors.
- Efficient communication and coordination between patient, doctor, nurse, and lab.
- Improved patient satisfaction and operational efficiency for the clinic.