marwa ayed

PROJECT PARENTCARE

Project Description (Cahier des charges)

Objective of the Project

The SOS application aims to create a digital bridge between adult children and their elderly parents, enabling remote health monitoring and care coordination. The primary objective is to provide peace of mind to children living far from their parents by offering real-time health monitoring, medication management, and emergency alert capabilities.

Context

In today's increasingly mobile society, families often live geographically separated, making it challenging for adult children to monitor and support their elderly parents' healthcare needs. The aging population faces various health challenges that require consistent monitoring and timely intervention. SOS addresses this gap by leveraging technology to enable remote care coordination between family members and healthcare providers.

Fonctionnalités Clés

****Core Functionalities:****

- **Health Monitoring:** Real-time tracking of vital health indicators (blood pressure, glucose levels, etc.)

- **Medication Management:** Reminders and tracking of medication adherence

- **Appointment Tracking:** Calendar and reminders for medical appointments

- **Emergency Alerts:** SOS button for immediate assistance in emergencies

- **Daily Check-ins:** Simple daily confirmation of well-being

- **Document Management:** Storage and sharing of medical documents and test results

- **Multi-user Access:** Role-based access for family members and caregivers

User-Specific Functionalities:

For Children (Adult Children):

- Account creation and parent invitation
- Manual entry of parent health information
- Health data monitoring dashboard
- Medication and appointment reminder setup
- Alert notifications (emergency, missed medication, missed check-ins)
- Document viewing and management
- Access sharing with other family members

For Parents (Elderly):

- Account creation via invitation acceptance
- Health document uploading
- Medication reminder reception
- Daily check-in confirmation
- Emergency SOS alert triggering

For Doctors/Medical Professionals:

- Patient medical information entry
- Medication prescription and recommendations
- Appointment scheduling
- Direct communication with family members
- Health complication alerts

Users

The application serves three primary user types:

1. **Children (Adult Children):** Primary caregivers who monitor their parents remotely

2. **Parents (Elderly):** The individuals whose health is being monitored

3. **Doctors/Medical Professionals:** Healthcare providers who contribute medical information and guidance

Expected Results

Improved health outcomes for elderly parents through consistent monitoring

Reduced hospitalizations due to early intervention and medication adherence

Enhanced coordination between family members in providing care

Decreased anxiety for adult children through increased awareness of parents' health status

Streamlined communication between healthcare providers and families

Timely response to emergency situations

Better documentation and tracking of health history

Tools, Technologies, and Frameworks

**Frontend Development:

- React Native for cross-platform mobile application development

- Redux for state management

- Material UI components for accessible interface design

**Backend Development:

- Node.js with Express.js for API development

- MongoDB for database management

- Firebase for real-time notifications and authentication

**Cloud Services:

- AWS S3 for document storage

- AWS Lambda for serverless functions

- Amazon CloudFront for content delivery

**Security:

- JWT for authentication

- AES-256 encryption for sensitive health data

- HTTPS/TLS for secure data transmission

**APIs and Integrations:

- Twilio for SMS notifications

- Google Calendar API for appointment management

- Health device APIs for direct data collection

**Development Tools:

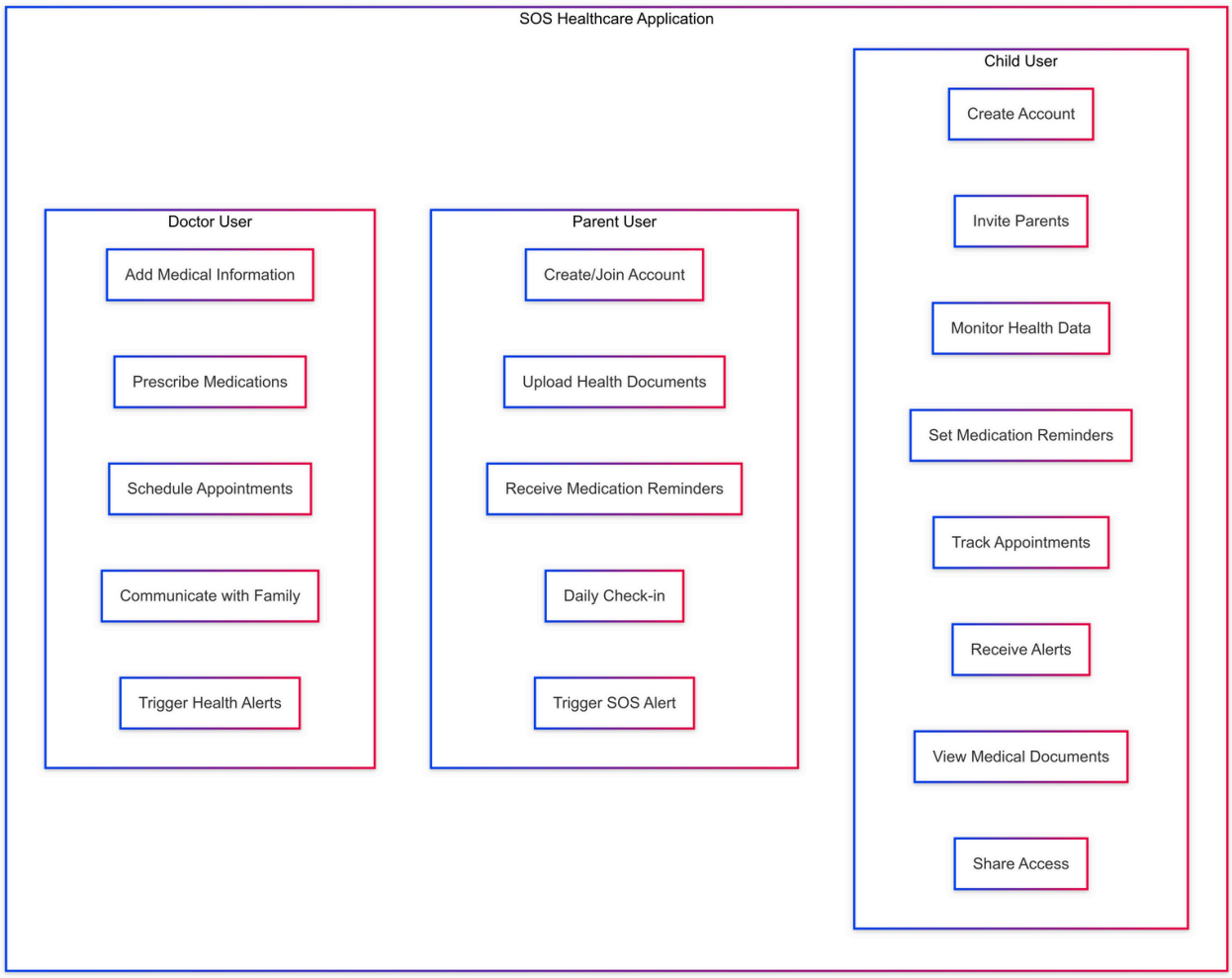
- Git for version control

- Docker for containerization

- Jenkins for CI/CD pipeline

- trello for project management

diagramme usecase:



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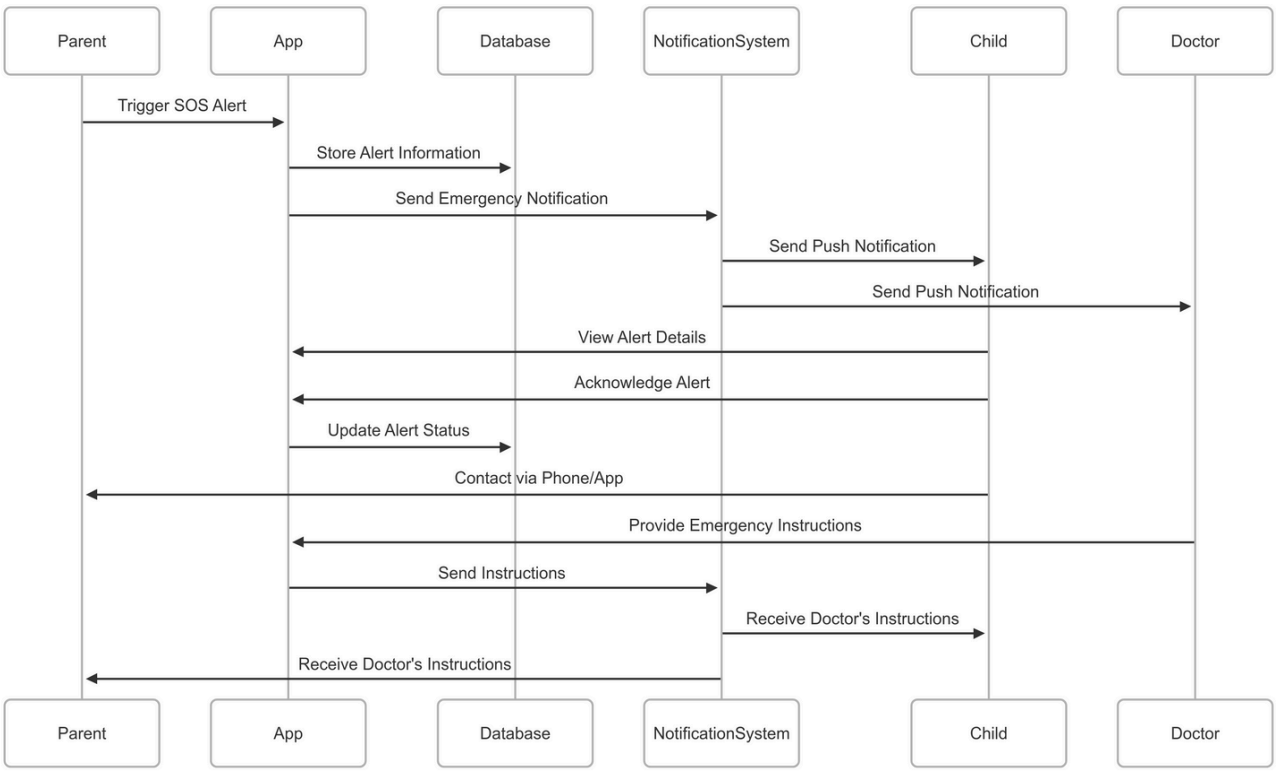
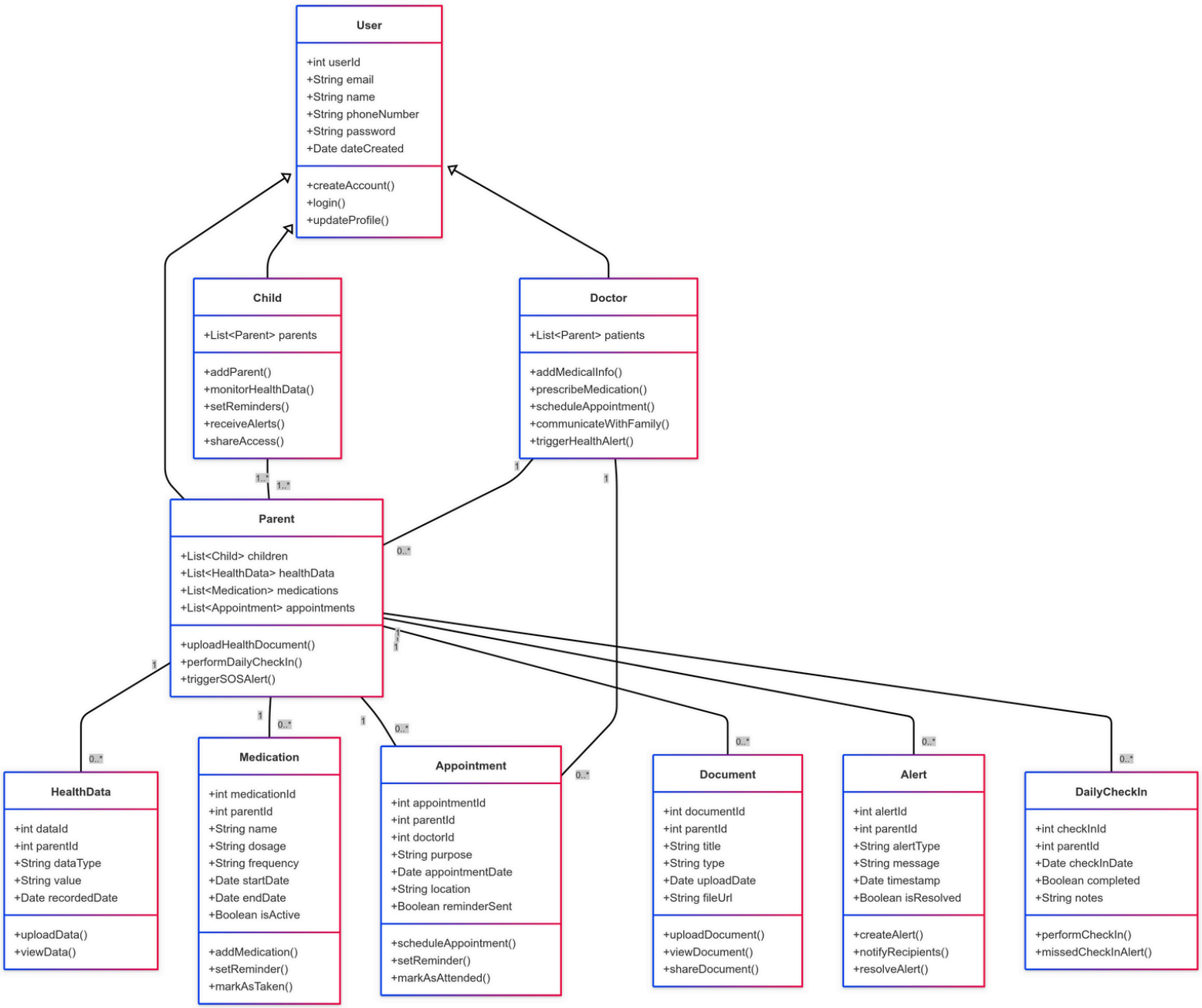
diagramme de classe :