HAWAII HEALTH RISK ASSESSMENT SYSTEM

Transforming Healthcare Outcomes with AI

Introduction

What is Hawaii Health Risk Assessment System?

The Hawaii Health Risk Assessment System is an innovative healthcare platform leveraging AI to assess health risks, generate personalized reports, and simplify appointment bookings.

Why Hawaii Health Risk Assessment System?

- Addresses delays in health risk detection.
- Provides a centralized data system for better health management.
- Aims to improve healthcare outcomes in Hawaii and beyond.

Focus Areas:

- Early detection.
- Data-driven decision-making.
- Enhanced accessibility to healthcare services.

Vision

To revolutionize healthcare in Hawaii by leveraging AI to empower individuals with early health risk detection, promote equitable healthcare access, and enable data-driven public health strategies.

Mission

To create a healthier future where AI bridges gaps in healthcare, ensuring timely interventions, improving population health, and setting a global benchmark for innovative health systems.

Problem Statement

Challenges in Healthcare:

- Delayed risk detection.
- Lack of centralized patient data.
- Difficulty accessing healthcare services.

Targeted Solution:

- AI-driven health risk assessment and integrated systems.

Addressing Hawaii's Healthcare Needs

Geographic Challenges

- Hawaii's island geography limits access to healthcare, particularly for rural communities.
- Patients in remote areas often face delays in receiving critical care.

Healthcare Workforce Shortages

- A shortage of primary care providers, especially in rural areas, exacerbates health disparities.
- Rural regions of Hawaii have fewer than 50% of the required healthcare providers, as reported by the Hawaii State Department of Health.

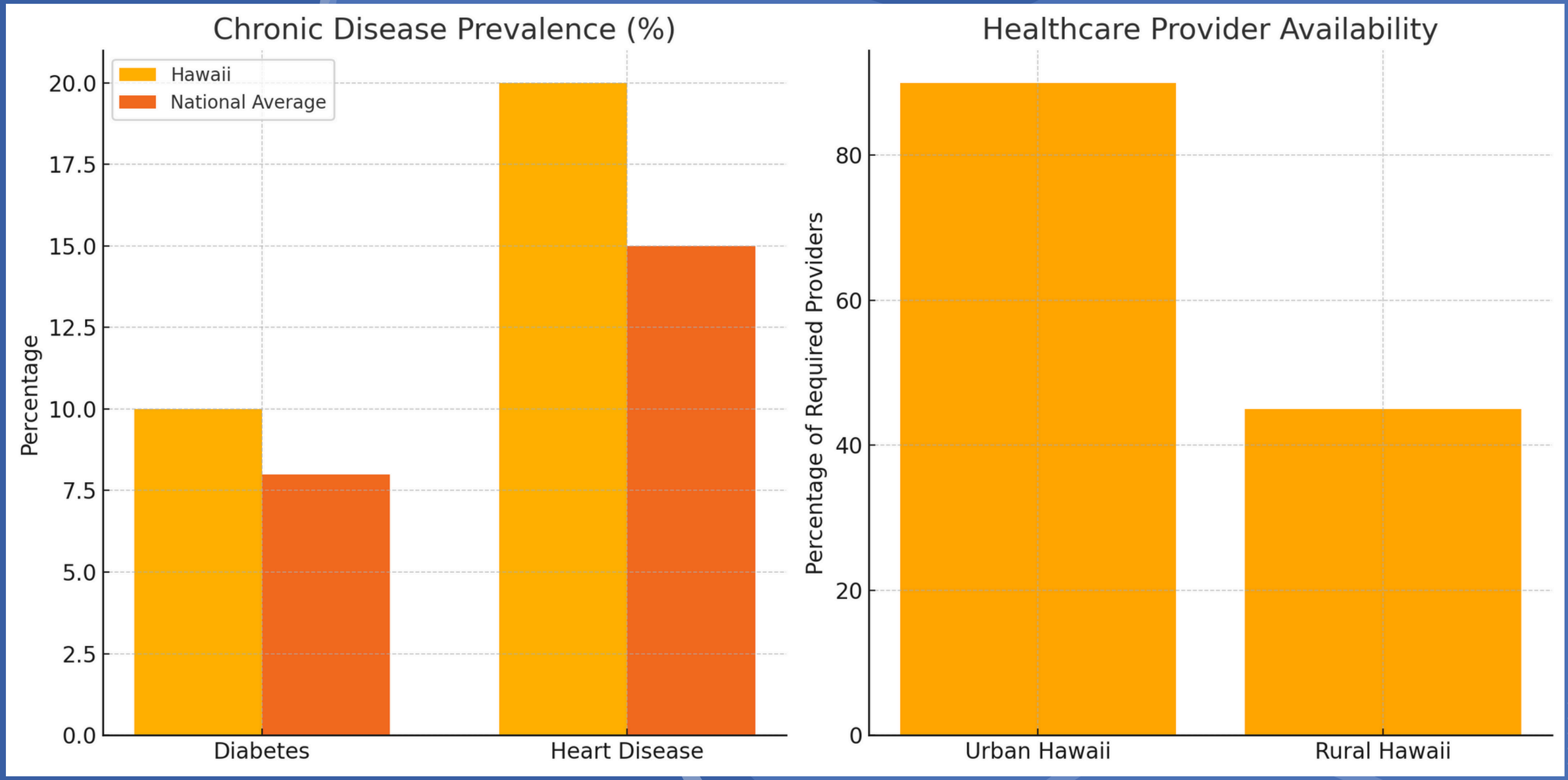
Chronic Disease Prevalence

- Cardiovascular diseases and diabetes are among the leading health concerns in Hawaii.
- According to the CDC, nearly 1 in 10 residents suffers from diabetes, and heart disease accounts for 20% of deaths annually.

Data-Driven Solutions

- Addressing these issues requires innovative tools like AI-driven health assessments to provide early detection and improve resource allocation.
- Empowering public health officials with aggregated data to optimize interventions is crucial.

Chronic Diseases and Provider Availability



Key Features

- **AI Health Risk Assessment:** Personalized risk reports based on user inputs.
- **Appointment Booking:** Select hospital, date, and time seamlessly.
- **Data Storage & Security:** SQLite database and JSON files for structured and secure storage.
- **Admin Dashboard:** City/state health trends for monitoring and research.

Technologies Used

- **Frontend:** HTML, CSS, JavaScript, Bootstrap.
- **Backend:** Python (Flask), SQLite3, JSON.
- **AI Model:** Generative AI (Gemini API).
- **APIs:** OpenStreetMap for location integration.

Application Workflow

Step 1: User fills out the form.

Step 2: Data is processed by the AI model.

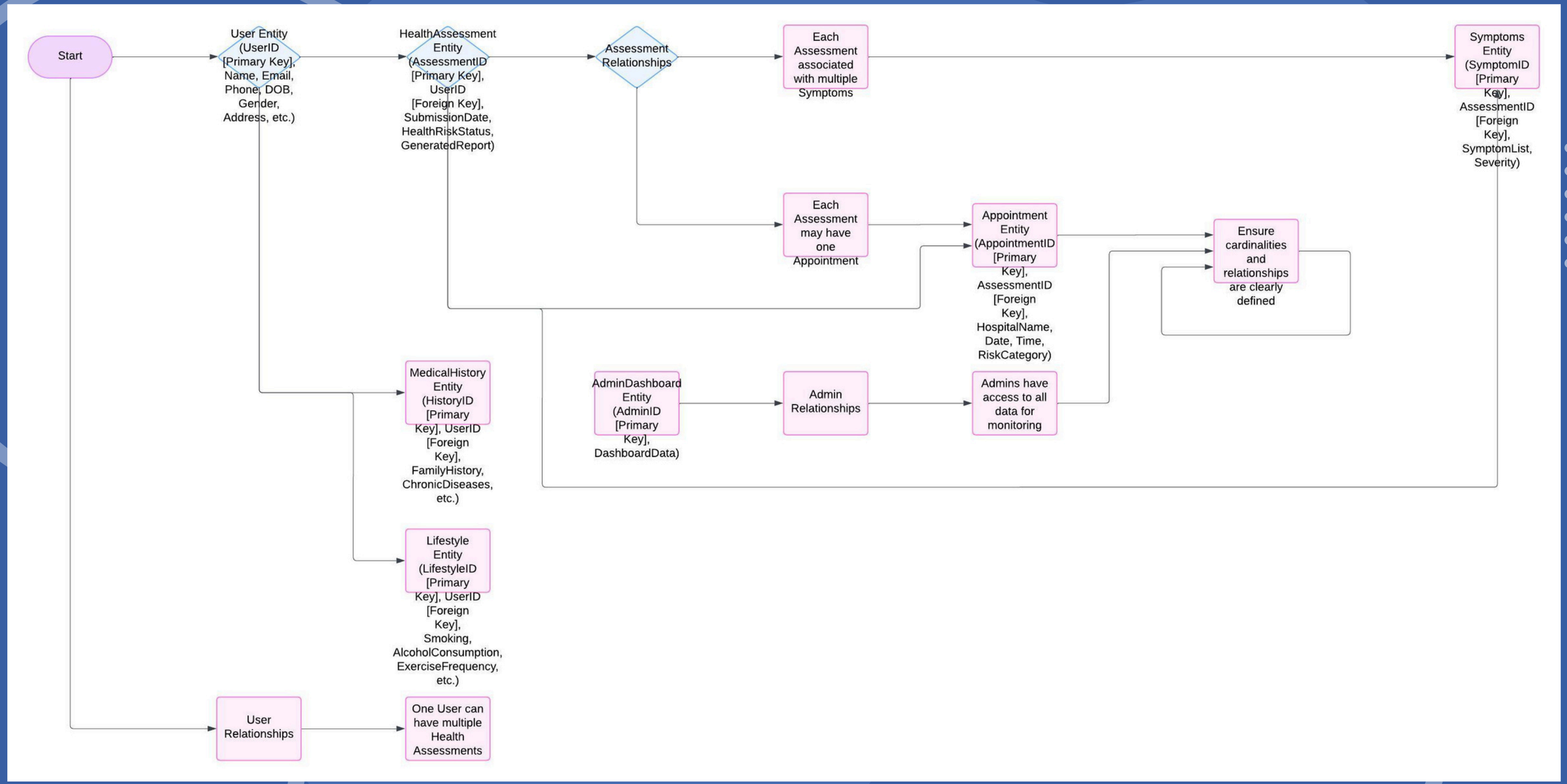
Step 3: Health risk report is generated.

Step 4: Risk status panel shows outcomes.

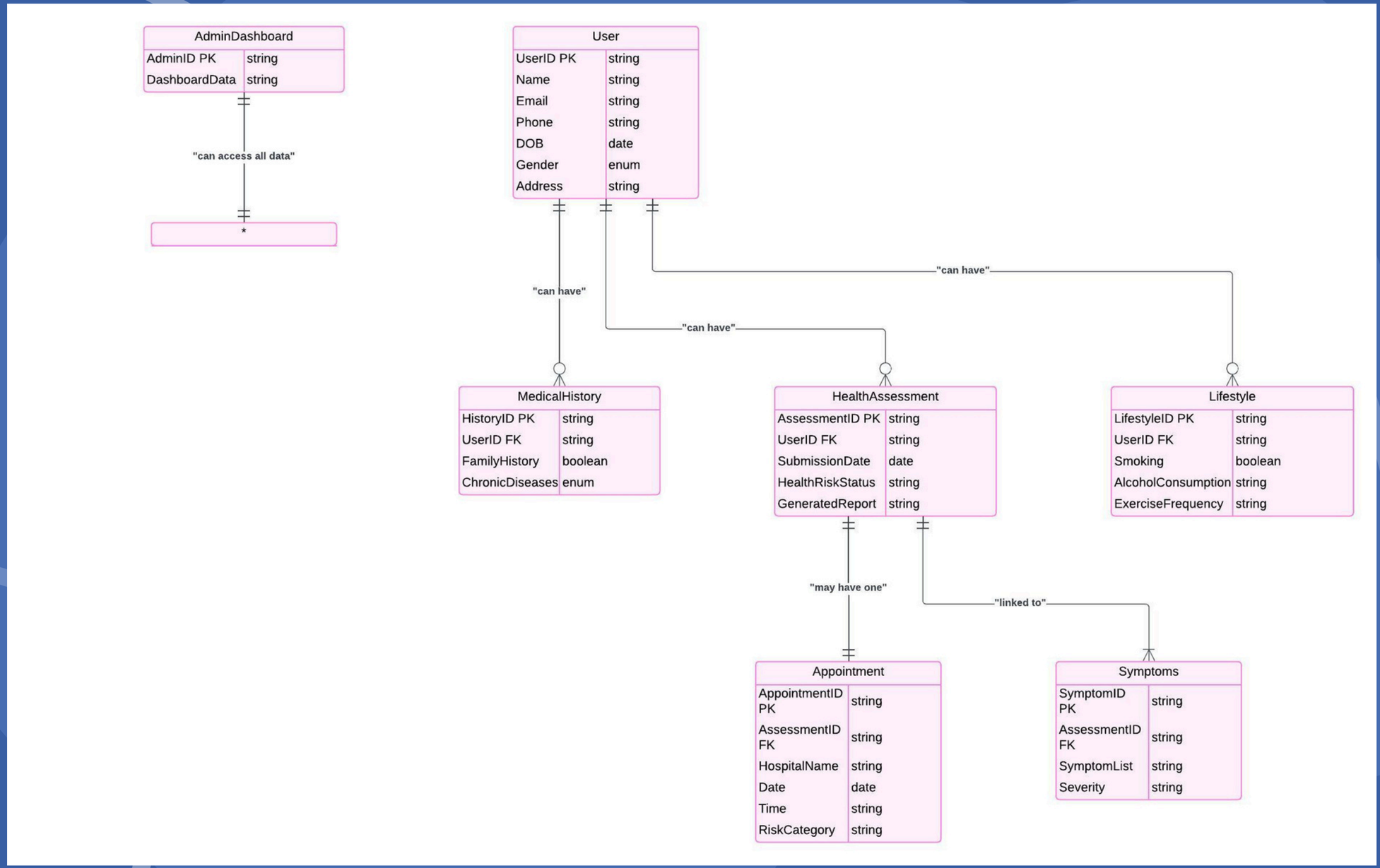
Step 5: Users book appointments if necessary.

Step 6: Admin dashboard displays trends and data.

Application Flowchart



Entity-Relationship Diagram



Benefits of Hawaii Health Risk Assessment System

For Users:

- Early detection of health risks.
- Simplified access to healthcare services.

For Admins:

- Comprehensive data for monitoring and public health strategies.
- Facilitates research and policymaking.

Innovation & Alignment

Healthcare Domains Addressed:

- Population Health.
- Public Health and Patient Safety.

Conditions Targeted:

- Cardiovascular and Metabolic Health.
- Diabetes Management.

Use Case Example

Scenario:

- A 45-year-old user completes the form.
- The system flags a risk of diabetes based on responses.
- They book an appointment for follow-up care.
- Admin dashboard aggregates this data for city/state trends.

Impact on Hawaii Healthcare

- **Improved early intervention rates.**
- **Streamlined healthcare access.**
- **Data-driven insights for public health strategies.** (Include research/statistics on healthcare outcomes in Hawaii.)

Future Scope

- **Expansion to other regions globally.**
- **Integration with wearables and IoT devices.**
- **Enhanced AI models for advanced diagnostics.**

THANK YOU