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**Heart App Documentation**

## **Project Overview**

Our Heart App is a lightweight, patient-focused web application built to assist users in tracking symptoms related to heart attacks. The app allows patients to conduct basic cardiac health assessments, store data for future reference, and download historical health records. It was developed with accessibility, simplicity, and data ownership in mind.

**Key Features**

**Conduct Cardiac Health Assessments**  
Patients can fill out structured forms indicating symptoms like chest pain, shortness of breath, fatigue, etc.

**View Patient History**  
Logged-in users can view previously submitted assessments in a clean, chronological format.

**Store Patient Data for Later Use**  
All submissions are stored in a secure database tied to user accounts for future retrieval.

**Analyze Health Trends**  
The system summarizes and visualizes symptom trends over time (e.g., frequency of certain symptoms).

**Download Health Records**  
Users can export their health data in a downloadable format (CSV), enabling offline use or doctor sharing.

**Technologies Used**

**Backend:** Django (Python)

**Frontend:** HTML/CSS, Bootstrap

**Database:** SQLite

**Export/Reports:** CSV and PDF generation using Python libraries

**Authentication:** Django's built-in user model (customized)

**Development Decisions & Changes**

### Planned Feature Not Implemented: AI Prediction

Initially, we planned to integrate an AI/ML model that would predict the likelihood of a heart attack based on submitted symptoms. However, due to our teams inexperience in the field of AI:

We were **unable to implement AI-based prediction** model. As an alternative, the app focuses on **user data ownership and continuity of care**, enabling users to **download and share** their health assessments with professionals.

### Pivot to Empowering Patients

Rather than acting as a diagnostic tool, Our app was refocused to:

Act as a **symptom tracking and journaling platform**.

Provide **useful health trend analysis** and **exportable records** for doctor consultations.

Prioritize **privacy and data transparency**.

**Additional Functionalities Developed**

**Admin Dashboard:** Admins can view anonymized patient data and export it for broader health trend analysis.

**Responsive Design:** The app works on mobile, tablet, and desktop devices.

**Error Handling & Form Validation:** Ensures clean data input and prevents submission errors.

**Testing & Validation**

Manual testing of form submissions, data storage, and download features.

**Security & Privacy**

All user data is stored securely using Django ORM.

Downloaded health data is only accessible by authenticated users.

No third-party APIs are used to ensure complete data control.