Heart Disease Information System

# Overview:

The Heart Disease Prediction System is a Flask-based web application designed to assist patients and doctors in managing and predicting heart disease-related data. The system provides a secure platform for patient registration, login, and storage of health measurements. Additionally, doctors can access patient records and assign patients to specific records.

# Key Features:

## Patient Registration and Login:

Patients can register with the system by providing essential details such as first name, last name, birthdate, username, and password.

Registered patients can log in to access their health records securely.

## Health Measurements:

Patients can view their health measurements, including data related to heart disease.

The system allows the retrieval of measurements for the logged-in patient.

## Doctor Interaction:

Doctors can log in to the system to access patient records.

Doctors have the capability to assign patients to specific records.

## Data Management:

The system facilitates the insertion of heart disease-related data, allowing patients to maintain accurate health records.

## Machine Learning Model Training:

The application includes functionality to train machine learning models, specifically Logistic Regression and Naive Bayes, based on historical heart disease data.

## Excel File Upload:

Users can upload Excel files containing heart disease data, making it convenient to insert large datasets into the system.

# How to Use:

## Patient Registration:

New patients can register by providing their personal details through the /signup endpoint.

## Patient Login:

Registered patients can log in using the /login endpoint.

## View Health Measurements:

Logged-in patients can view their health measurements using the /measurments endpoint.

## Doctor Login:

Doctors can log in using the /doctor\_login endpoint to access patient records.

## Insert Heart Disease Data:

Users can insert new heart disease data through the /insertHeartDiseaseData endpoint.

## Upload Excel File:

Users can upload Excel files containing heart disease data using the /uploadExcelAndInsert endpoint.

## Train Machine Learning Models:

The system supports training of Logistic Regression and Naive Bayes models using the /trainModel and /trainNaiveBayes endpoints, respectively.

## Purpose:

The purpose of the Heart Disease Prediction System is to provide a user-friendly and secure platform for patients to manage their health records and for doctors to access patient information efficiently. The application aims to support predictive analytics through machine learning models, assisting in the early detection of potential heart disease risks.