

Project Title:

CARDIO HEALTH ANALYZER

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1. Introduction

Our Cardio Health Analyzer is a software python based application developed to assist both patients and healthcare providers in diagnosing diseases based on symptoms provided by the patient. It incorporates a user-friendly interface and utilizes data processing techniques to provide accurate information and recommendations.

2. Project Overview

The project comprises several modules including:

Login and Patient Profile Creation:

 Allows users to create profiles with basic information such as name, age, gender, weight, and height.



Disease Identifier:

Utilizes a symptom-based approach to identify potential diseases.

Prescription Generation:

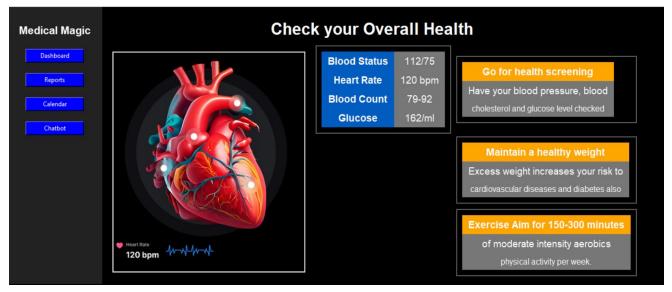
Provides prescription recommendations based on the identified disease.

Dashboard:

 Acts as a centralized hub for accessing different functionalities and displaying health-related data.

3. User Interface

 The user interface is designed to be intuitive and visually appealing. It consists of multiple pages each serving a specific purpose.



Login Page:

- Users input their credentials (name, age, gender) to access the application.
- Validation checks ensure accurate data entry.

Patient Profile Page:

- Users can input additional information such as weight and height.
- Data is stored for future reference and for online hospital record.

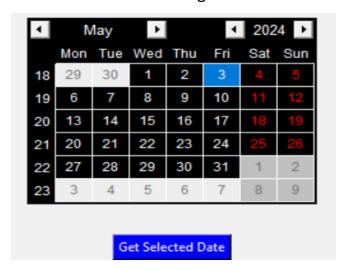
Disease Identifier Page:

- Users select symptoms from a predefined list.
- The application identifies potential diseases based on the selected symptoms.
- Prescription recommendations are provided accordingly.

weakness and numbness	pain below the ribs	Chest pain	
speech problems	nervousness	feeling faint or sudden loss of blood pressure	
☐ confusion	edema/excess fluid retention	anxiety	
☐ loss of coordination/balance	☐ sweating	☐ leg pain	
□ visual changes	☐ Stenosis	aching aching	
insomnia insomnia	☐ Prolapse	heaviness	
□ pain	☐ Atresia	ramping cramping	
mood disturbances	pulmonary hypertension	☐ tightness	
Cognitive dysfunction	☐ fatigue	restless legs syndrome	
□ nausea	shortness of breath	skin irritation	
☐ palpitations	☐ dizziness		
Identify Disease	next		

Dashboard Interface:

- Provides quick access to different features like reports, calendar, etc.
- Displays health-related data in an organized manner.



4. Functionality

Disease Identification Algorithm:

Utilizes a symptom-to-disease mapping to identify potential diseases.

- Matches symptoms provided by the user with predefined symptom sets associated with various diseases.
- Provides accurate disease suggestions based on symptom matches.

Email Prescription:

- Generates a prescription based on the identified disease.
- Sends the prescription to the user's email address using SMTP.



Data Handling and Storage:

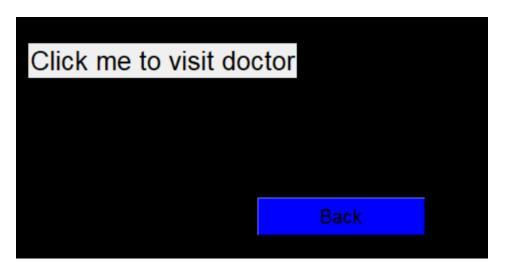
- Patient profiles and health-related data are stored in text files and CSV format.
- CSV file "hospital_record.csv" is used to store patient profiles and basic health information.
- The "data.txt" file stores additional patient data such as prescription details.
- Data is retrieved and updated as necessary during the user's interaction with the application.

A	Α	В	C	D	Е
1	erty	56	Male	150 cm	50 kg
2	wert	32	Male	150 cm	60 kg
3	dcfg	34	Female	150 cm	50 kg
4	ad	2	Male	150 cm	50 kg
5	gwr	234	Female	150 cm	50 kg
6	sad	23	Female	150 cm	50 kg
7	Dua Rizwa	18	Female	160 cm	50 kg
8	Dua Rizwa	18	Female	150 cm	50 kg

Implementation Process of Chatbot:

a. Hyperlink Integration:

- Utilized Tkinter's ttk.Label widget to create a clickable hyperlink-style label within the interface.
- Incorporated the webbrowser module to open a specified link in the default web browser upon clicking the label.
- Navigation Controls: Implemented a "Back" button using Tkinter's Button widget to enable users to navigate back to the previous screen.
- Defined a function (go_back) to hide the current window, execute a designated Python script (kivy.py), and destroy the root window upon button click.



Key Features and Functionality:

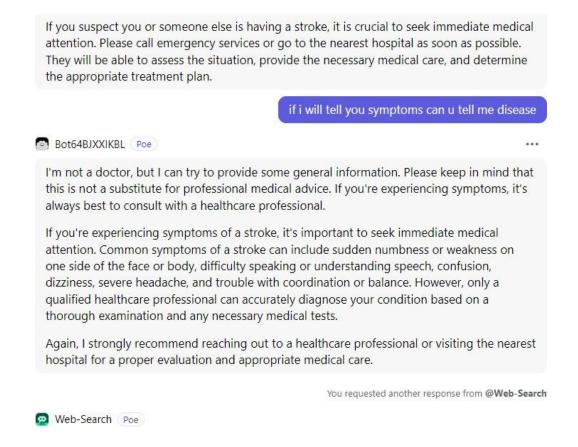
- Hyperlink Label: Users can access external resources or web pages related to cardio health by clicking on the hyperlink-style label.
- Seamless Navigation: The inclusion of a "Back" button facilitates intuitive navigation between different screens or functionalities within the application.
- User-Friendly Interface: The interface design prioritizes user convenience and accessibility, enhancing the overall user experience.
- User Interaction:

Clicking the hyperlink label directs users to a designated web page containing relevant information or resources pertaining to cardiovascular health.

The "Back" button allows users to return to the previous screen or activity within the application, promoting fluid navigation and task completion.

Outcomes and Benefits:

 Enhanced Accessibility: The integration of hyperlink functionality enables users to access supplementary information or resources conveniently within the application interface.



Improved User Engagement: Seamless navigation controls contribute to a more user-friendly experience, encouraging prolonged engagement with the Cardio Health Analyzer.

 Streamlined Workflow: Users can easily navigate between different sections or functionalities of the application, enhancing overall usability and efficiency.

Future Considerations:

- User Feedback: Gather user feedback to identify areas for further improvement or additional features that enhance usability and functionality.
- Performance Optimization: Continuously evaluate and optimize the application's performance to ensure responsiveness and reliability, particularly concerning navigation controls.

5. Conclusion

Cardio Health Analyzer aims to streamline the process of disease identification and prescription generation for both patients and healthcare providers. With its intuitive interface and robust functionality, it serves as a valuable tool in the healthcare domain. Further enhancements could include integration with medical databases for more comprehensive disease analysis and treatment.

References

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