

Health Symptom Checker Documentation

1. System Overview

The Health Symptom Checker is a web application built using the Flask framework. It allows users to select symptoms, provide additional details (duration and severity), and receive potential diagnoses and recommendations based on predefined rules.

2. Architecture

- **Framework:** The application is built using Flask, a lightweight web framework for Python.
- **Routing:** The application has three main routes:
 - `/`: Home page for symptom selection.
 - `/details`: Page for entering additional details about selected symptoms.
 - `/result`: Page displaying the diagnosis results.
- **Session Management:** User sessions are managed to store selected symptoms and user input.

3. User Interface

- **index.html:**
 - Allows users to select symptoms using checkboxes.
 - Displays an error message if no symptoms are selected.
- **details.html:**
 - Prompts users to provide the duration and severity for each selected symptom.
 - Includes form validation to ensure all fields are filled.
- **result.html:**
 - Displays the user's reported symptoms along with their duration and severity.
 - Lists potential conditions and recommendations based on the evaluated symptoms.

4. Knowledge Base

The knowledge base is stored in `knowledge_base.json`, which includes: - **Symptoms:** A list of recognized symptoms. - **Rules:** Conditions for diagnosis, including symptoms, required attributes (like duration or severity), and associated recommendations.

5. Functionality

- **evaluate_symptoms(user_data):** Evaluates user symptoms against predefined rules and returns relevant diagnoses, advice, and home reme-

dies.

- **rule_matches(conditions, user_data):** Checks if user-provided symptoms match a rule's conditions, supporting various checks (e.g., duration, severity).

6. Usage Instructions

1. Navigate to the home page to select symptoms.
2. Provide additional details for the selected symptoms.
3. View the diagnosis results and recommendations.

7. How to Run the System

To run the Health Symptom Checker system, follow these steps: 1. Ensure you have Python installed on your machine. 2. Install the required dependencies by running: `pip install Flask` 3. Run the application using the command: `python app.py` 4. Open your web browser and go to `http://127.0.0.1:5000` to access the application.