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Integrating AI and Cybersecurity for Enhanced Health Management and Data Protection in Global Healthcare Nutrient Companion

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ABSTRACT :

In contemporary society, health constitutes a paramount component essential for the enhancement of our communities, and it is an indispensable requirement for all individuals. This study is predicated on the intersection of global healthcare nutrients and artificial intelligence technology. All individual data are preserved in a secure manner utilizing advanced cybersecurity measures. The aim of this research is extract from the healthcare services gathering by the monitoring of a wellness coach. The global healthcare system is preserved by monitoring individuals' daily activities in order to improve and lead them toward a better way of life. The monitoring of their eating habits, including breakfast, lunch, and dinner. This study assists to steer and assess recommendations for the content of their meals, guaranteeing a significant presence of balanced nutrients. When an individual can engage in this process, they can avert disastrous health issues. It will make to everyone happy and healthier life.

Keywords: behaviors, predicated, wellness coach, surveillance, balanced nutrients

INTRODUCTION :

In a global view, it is necessary to important good health by consuming need-nutrient foods. Everyone deserves take to a balanced diet to maintain a healthy and happy lifestyle. The purpose of this research is to better the health of each and every person. Everyone has the capacity to build a healthy lifestyle with their best habits. However, increased digital health data management creates cybersecurity vulnerabilities, making data security paramount. A comprehensive solution integrating AI nutrition insights and advanced cybersecurity for safe, personalized health management—the Global Healthcare Nutrient Companion—is explored in this paper.

2. THE ROLE OF AI IN PERSONALIZED NUTRITION :

i. Data Collection and Analysis

All collectable records of findings are essential for personalizing and improving that person's health.

- Health information encompassing wearable data, medical records, and dietary logs.
- AI algorithms assess nutrient deficiencies, metabolic rates, and dietary patterns.

ii. Predictive Modelling

They use AI -machine learning models to analyse and specialization of their food habits and predicting future health risks and illness.
AI takes on the role of a wellness advisor to keep everyone life habits, monitoring.

iii. Real-Time Recommendations

Real-time biometric data (BMI, glucose levels, physical activity, sleep patterns, body water level, fat level) is used to generate by their daily life style based.

3. CYBERSECURITY CHALLENGES IN NUTRITIONAL HEALTH PLATFORMS :

i. Sensitivity of Nutritional and Health Data

In this information of data retrieve from GHCNC using two-step verification process to access their personal information.
Cyberattacks can be prevented by cybersecurity to loose and missing data.

ii. Common Threats

Social engineering and phishing attacks target the user's data.

The data is not accessible to or manipulated by unauthorized individuals.

4. INTEGRATING CYBERSECURITY IN THE GLOBAL HEALTHCARE NUTRIENT COMPANION :

i. Secure Data Architecture

End-to-end encryption makes it possible to safely access and transfer all data without losing any of it.

All data is accessed using access controls. That is, ensure that only authorized personnel have access to confidential information.

ii. Threat Detection and Response

Cybersecurity is managed in the secure data using continuous monitoring systems with real-time alerts.

The artificial intelligence-powered technology identifies suspicious activity.

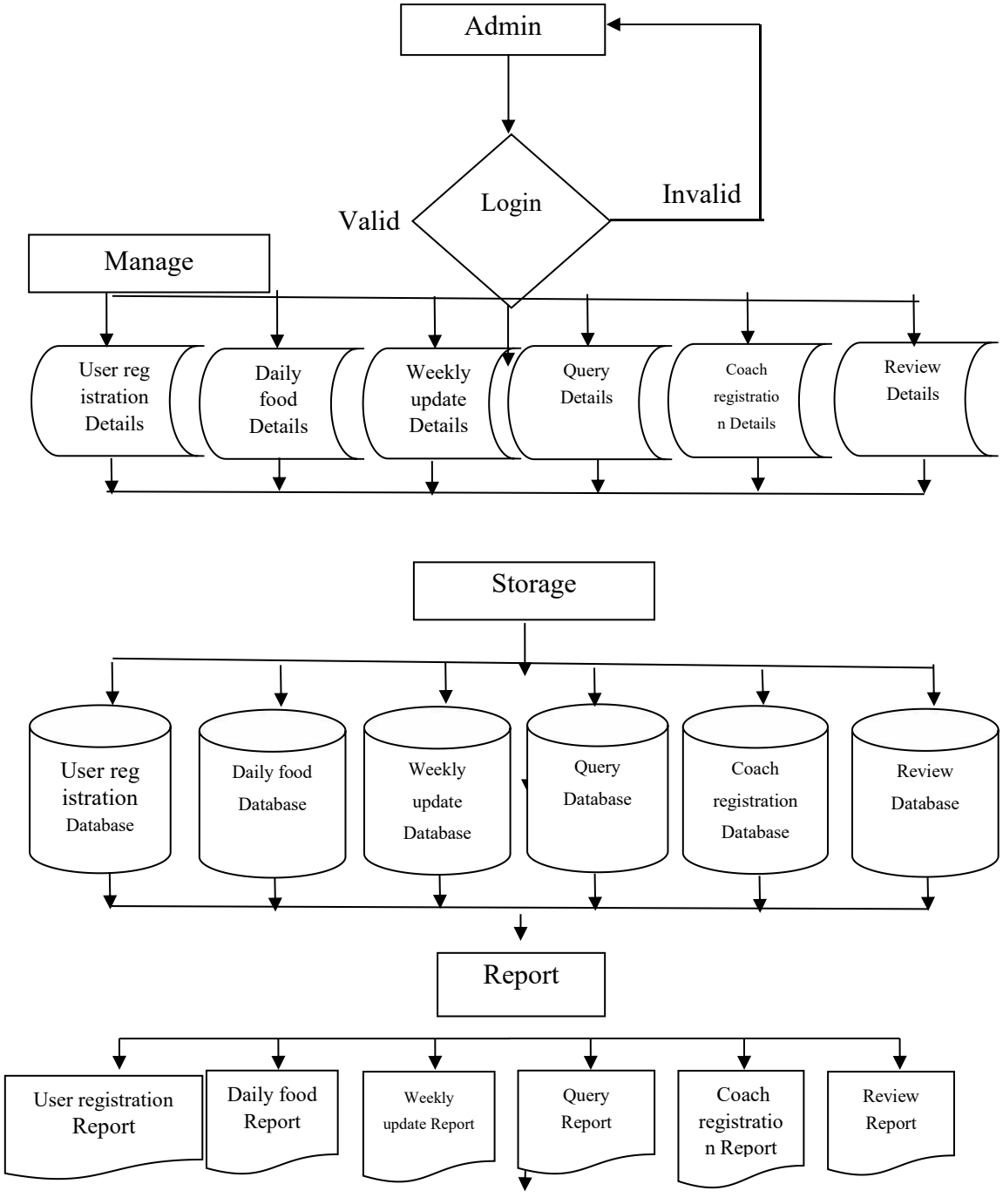
5. CASE STUDY AND IMPLEMENTATION MODEL :

i. Results and Observations

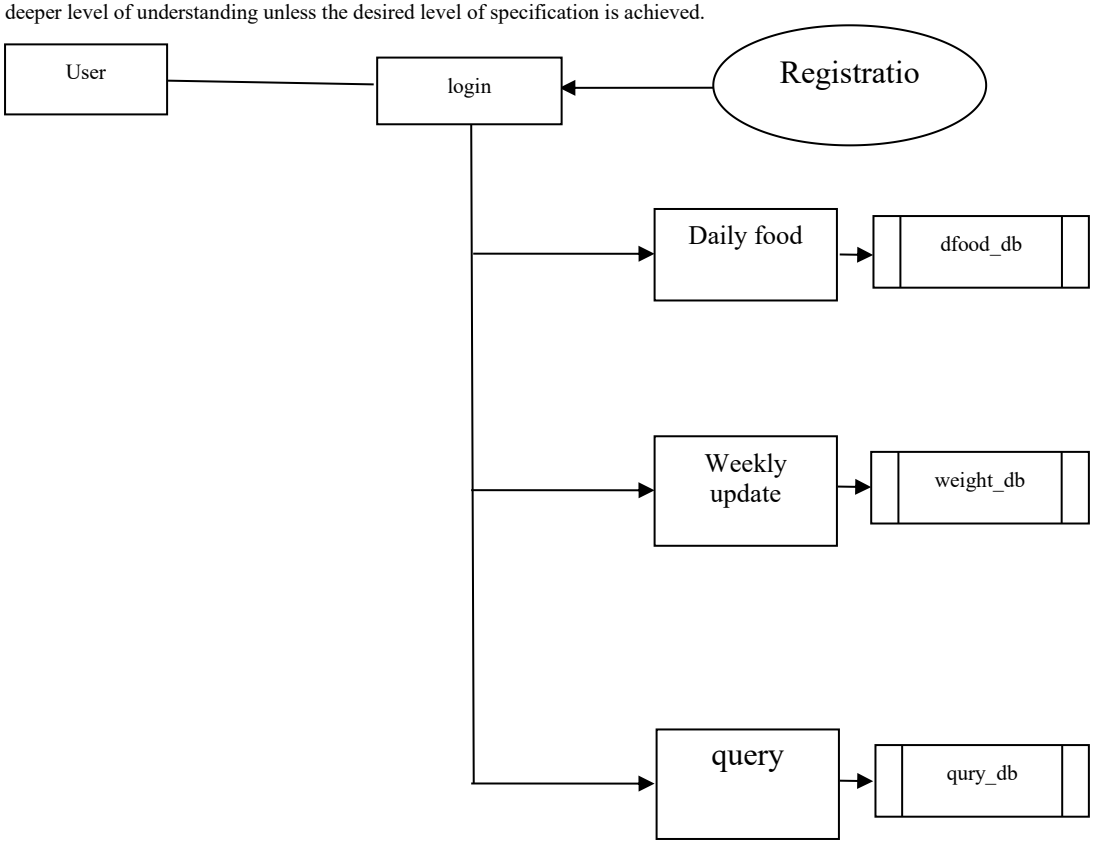
Enhance along with that person's daily data set.

It will assist in determining the early detection of disease.

SYSTEM FLOW DIAGRAM



DFD shows how data flows inside the modules mentioned in Level Higher level DFDs can be transformed into more specific lower level DFDs with deeper level of understanding unless the desired level of specification is achieved.



6. BENEFITS AND FUTURE PROSPECTS :

6.1 Health Impact

The Global Healthcare Nutrient Companion (GHNC) is design features by the Scalability and adaptability. Design elements of the Global Healthcare Nutrient Companion (GHNC) include scalability and adaptability. Healthcare systems are being developed in every nation. Future improvements will be made to GHCNC in order to make it a healthier life style. Although patient data and personal information should be kept secure, cybersecurity could handle it. In the future, everyone will be aware of this research plan and can avoid illness as a result. when everyone will receive the guidance of their personal companion, they will be healthier always. In GHCNC every person can keep and touch with their wellness coach to improve their daily habits and manage their food and lifestyle. GHCNC purpose to make people happy and healthy life style by their discipline daily habits.

CONCLUSION :

In a technical sense, the positive and healthy aging factors are provided by global healthcare nutrients. A better lifestyle and better aging are the results of the global healthcare process. Global Healthcare Nutrient Companion collects information from individuals and analyzes it based on their lifestyle. Their lifestyle can be improved and made better based on their report.
The cybersecurity method ensures the security of their specific reports and personal information. It helps spread knowledge about healthy eating and living. Their wellness coach and the AI technology will monitor the process and adjust in real time.

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