

PERSONALIZED HEALTH AND WELLNESS ASSISTANT



ER DIAGRAM

Course Title – Software Engineering

Slot – G2 + TG2

Name – Vansh Kumar Payala

Registration No. – 22BAI1386

Introduction –

The ‘Personalized Health and Wellness Assistant’ will serve as a new generation mobile application that will include artificial intelligence and machine learning components to suggest a recommended health and wellness plan based on data inputted by the user. This is a new concept which will include a chatbot and will assist the users with medication and prescription guidance; therefore, the usage of the app will be enhanced while appropriate health support will be provided. The most important one is to educate and give specific recommendations concerning the state of one’s health and help to make the right decision.

To accomplish the mentioned above proposed objective of a well-structured and efficient manner of development, Software Development Life Cycle, namely the Incremental Model has been chosen. This way the application is develop in phases including this feedback of users and can be improved gradually by incorporating more features. Thus, when realizing the project in stages, it is also possible to ensure that each of the elements is functional and the final outcome is a usable application that will meet the needs of end-users. It also shows the concrete description of Incremental Model in the framework of the ‘Personalized Health and Wellness Assistant’, as well as naming all the activities of each phase and their outcomes.

ER Diagram –

Entities & Attributes –

1) User –

Attributes:

- User_ID (PK, integer(4))
- Name (string(20))
- Email (varchar(50))
- Password (varchar(10))
- Age (integer(2))
- Gender (varchar(6))
- ContactInfo (integer(10))
- MedicalHistory (varchar(20))

2) Health Record –

Attributes:

- Record_ID (PK, integer(4))
- User_ID (FK, integer(4))
- Date (varchar(10))
- Symptoms (varchar(100))
- Diagnosis (varchar(50))
- Prescription (varchar(100))

3) Prediction –

Attributes:

- Prediction_ID (PK, integer(4))
- User_ID (FK, integer(4))
- Record_ID (FK, integer(4))
- Predicted_Disease (varchar(50))
- Prediction_Confidence (varchar(20))
- Date (varchar(10))

4) Chatbot –

Attributes:

- Interaction_ID (PK, integer(4))
- User_ID (FK, integer(4))
- Record_ID (FK, integer(4))
- Interaction_Date (varchar(10))
- Query (varchar(500))
- Response (varchar(500))

5) Prescription –

Attributes:

- Prescription_ID (PK, integer(4))
- Interaction_ID (FK, integer(4))
- Medication_Name (varchar(50))
- Dosage (varchar(10))
- Duration (varchar(10))

6) Doctor –

Attributes:

- Doctor_ID (PK, integer(4))
- Name (varchar(20))
- Specialization (varchar(50))
- Contact_Info (integer(10))

7) Appointments –

Attributes:

- Appointment_ID (PK, integer(4))
- User_ID (FK, integer(4))
- Doctor_ID (FK, integer(4))
- Appointment_Date (varchar(10))
- Status (varchar(20))

Relationships and Cardinality –

1) User - Health Record:

- Relationship Name: "has"
- Cardinality: One-to-Many

2) User – Prediction:

- Relationship Name: "has"
- Cardinality: One-to-Many

3) User – Appointments:

- Relationship Name: "is assigned"
- Cardinality: One-to-Many

4) Health Record – Prediction:

- Relationship Name: "will have"
- Cardinality: One-to-One

5) Chatbot – Prescription:

- Relationship Name: " has prescribed"
- Cardinality: One-to-One

6) Health_Record – Prescription:

- Relationship Name: "is prescribed"
- Cardinality: One-to-Many

7) Doctor – Appointments:

- Relationship Name: "will take"
- Cardinality: One-to-Many

Final ER Diagram –

