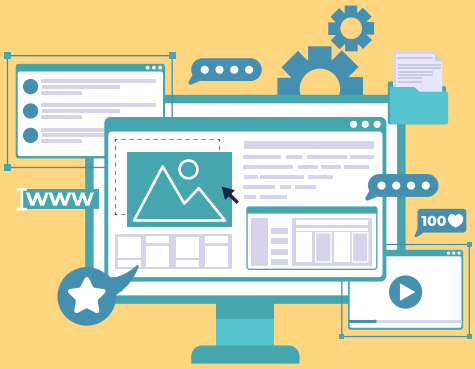
High Level Design



OVERVIEW

1

The high-level design of the Oncology Management System encompasses architectural components, system interactions, and data flow to achieve the application's objectives efficiently and securely.

2

ARCHITECTURE

The application follows a multi-tier architecture comprising presentation, application logic, and data storage layers.

PRESENTATION LAYER

This layer consists of the user interface components responsible for interacting with end-users. It includes web pages, and dashboards for displaying patient information, treatment plans, and documentation.

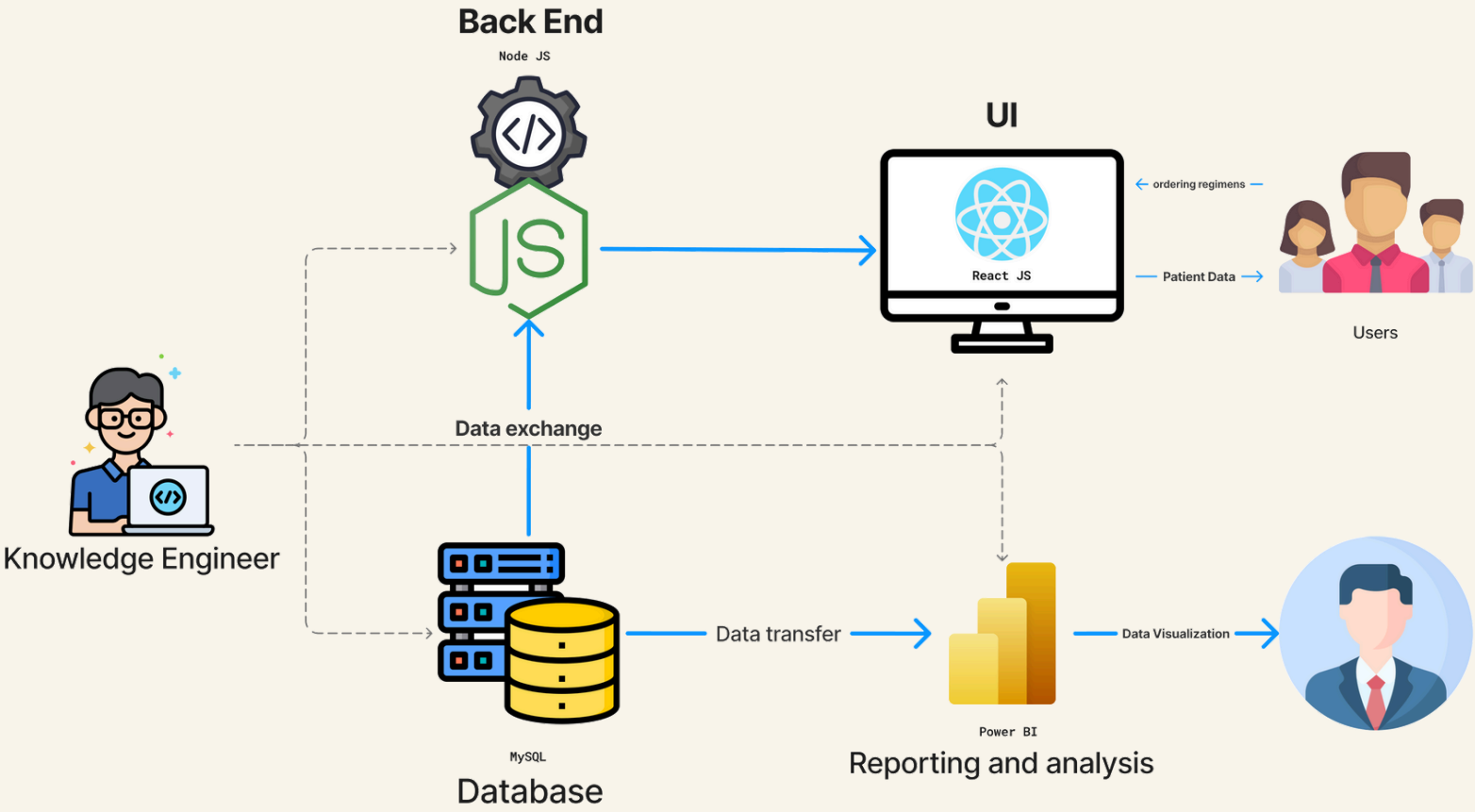
APPLICATION LOGIC LAYER

The application logic layer contains the business logic and processing components responsible for managing user requests, executing application functionalities, and coordinating data flow between the presentation and data layers.

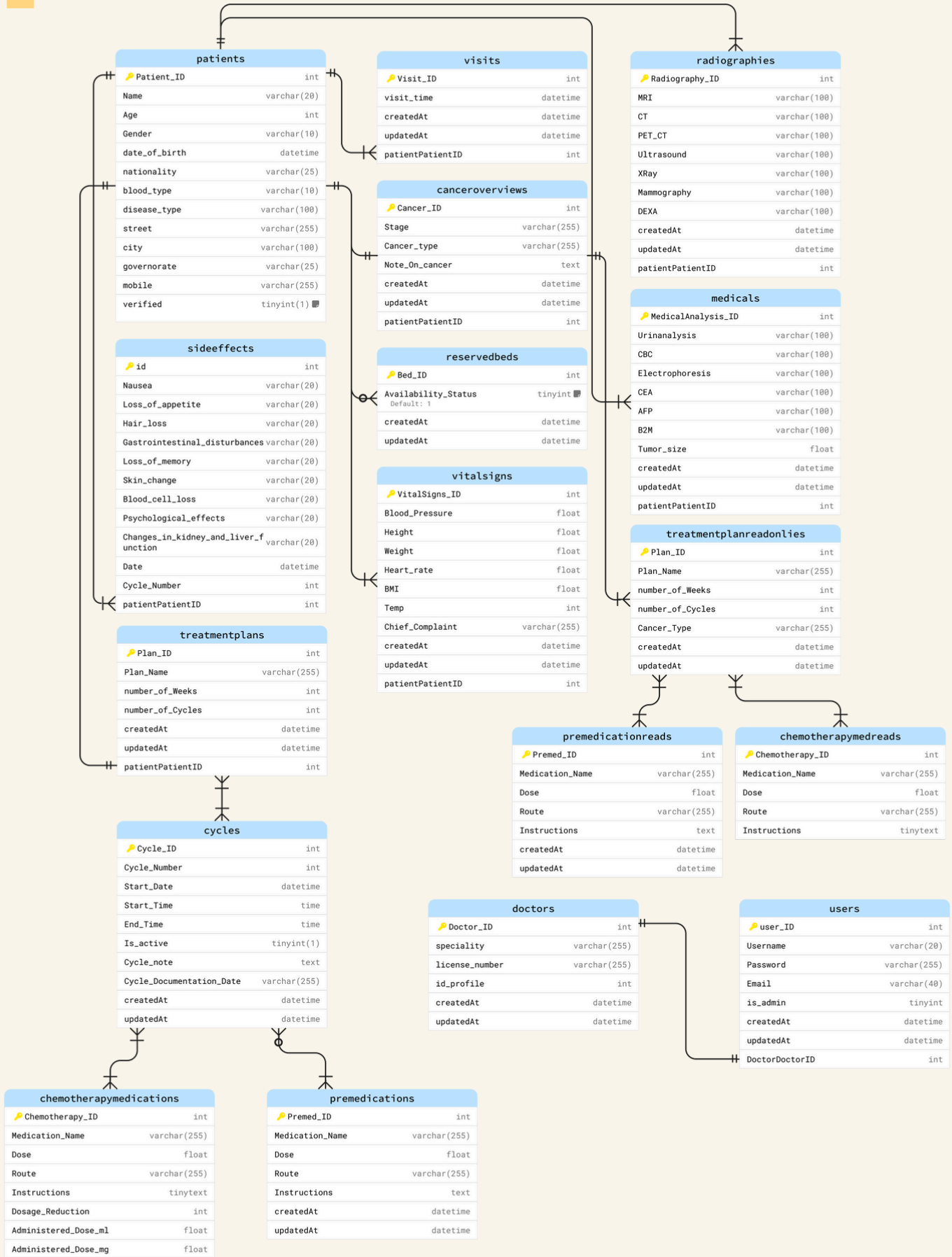
DATA STORAGE LAYER

This layer comprises the database systems used for storing and retrieving patient data, chemotherapy plans, medications, and treatment documentation. It includes relational databases for structured data storage.

3 PROJECT STRUCTURE



4 ER-DIAGRAM



5 COMPONENTS

USER INTERFACE COMPONENTS

Developed using modern web technologies such as React.js, the user interface components provide an intuitive and responsive interface for healthcare professionals to interact with the application.

AUTHENTICATION AND AUTHORIZATION MODULE

This module handles user authentication and authorization, ensuring secure access to the application features based on user roles and permissions. It utilizes token-based authentication mechanisms for session management and access control.

PATIENT INFORMATION MANAGEMENT MODULE

Responsible for managing patient demographics, vital signs, pathology history, radiology history, and detailed cancer condition profiles. It includes functionalities for adding, updating, and retrieving patient information securely.

CHEMOTHERAPY PLAN AND CYCLE MANAGEMENT MODULE

this module facilitates the creation, management, and scheduling of chemotherapy plans and cycles for individual patients. It includes features for dividing treatment plans into cycles, documenting treatment sessions, and monitoring treatment progress.

MEDICATION AND DOSAGE TRACKING MODULE

racks prescribed medications, chemotherapy dosages, frequencies, and administration instructions. It ensures medication adherence, monitors side effects, and generates alerts for healthcare professionals as needed.

CYCLE DOCUMENTATION MODULE

Enables comprehensive documentation of treatment cycles, capturing timestamps, administered dosages, medications, pre-medications, and observed side effects. It provides note-taking functionalities for healthcare professionals to record observations and assessments during treatment sessions.