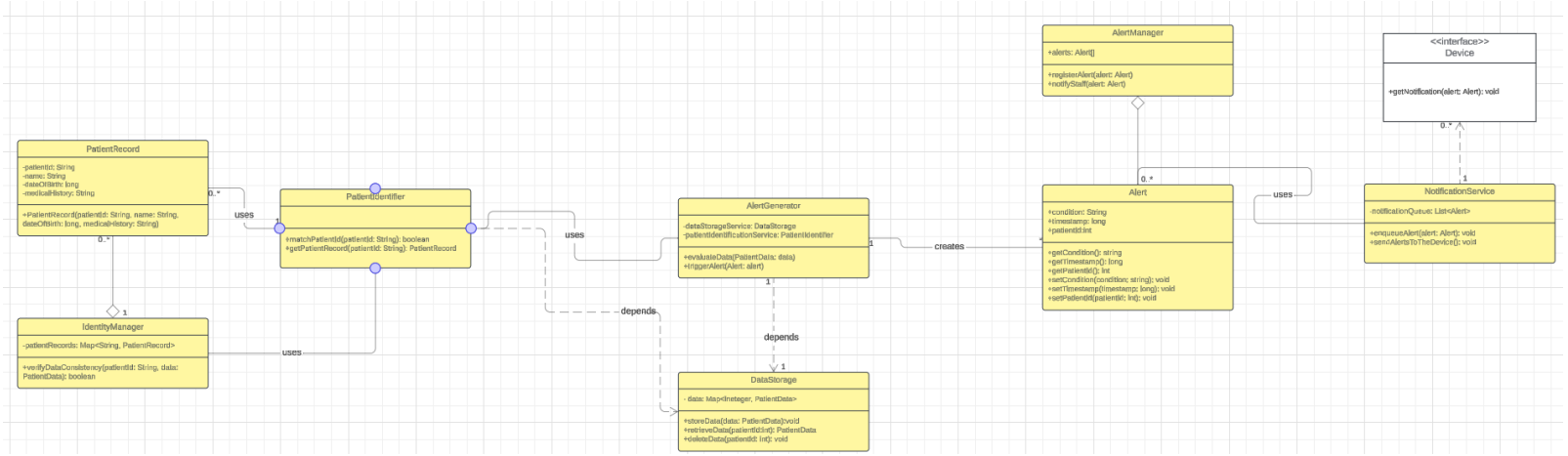
Alert&Identification system



The backbone of the system is PatientRecord, a critical patient data store that interacts with PatientIdentifier to accurately identify the patient and link incoming data to the correct medical record. PatientIdentifier uses the matchPatientId method to match the identifier and the getPatientRecord method to retrieve patient information.

The IdentityManager serves as the central node to maintain the integrity of patient data, using the PatientRecord map and the verifyDataConsistency method to check the accuracy of the data. It is linked to the PatientRecord through aggregation, allowing multiple records to be manipulated without directly managing their lifecycle.

AlertGenerator is a component that analyses the data provided by DataStorage against critical criteria. When data matching the alert criteria is detected, AlertGenerator activates the triggerAlert method, generating an Alert.

The generated Alert is passed to the AlertManager, which then uses the NotificationService to send notifications through the Device interface. The NotificationService processes and sends notifications to a queue of medical staff devices, allowing for rapid response to medical events. The entire system is designed to ensure timeliness of medical staff response and improve the quality of patient care.