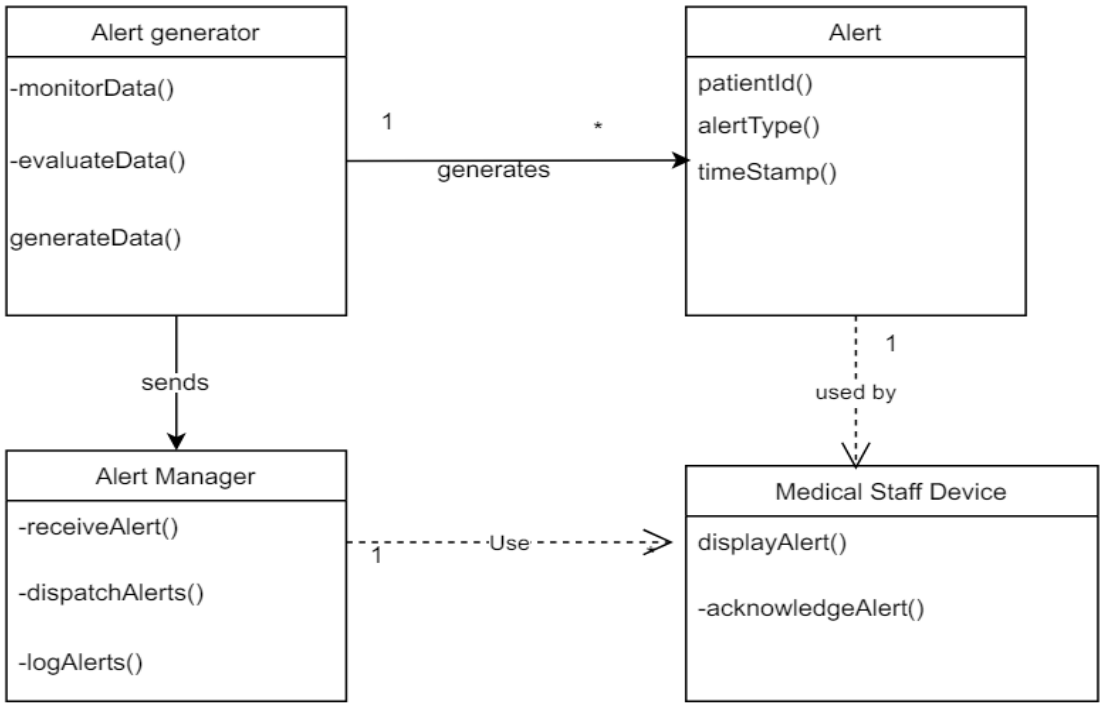
UML Diagrams

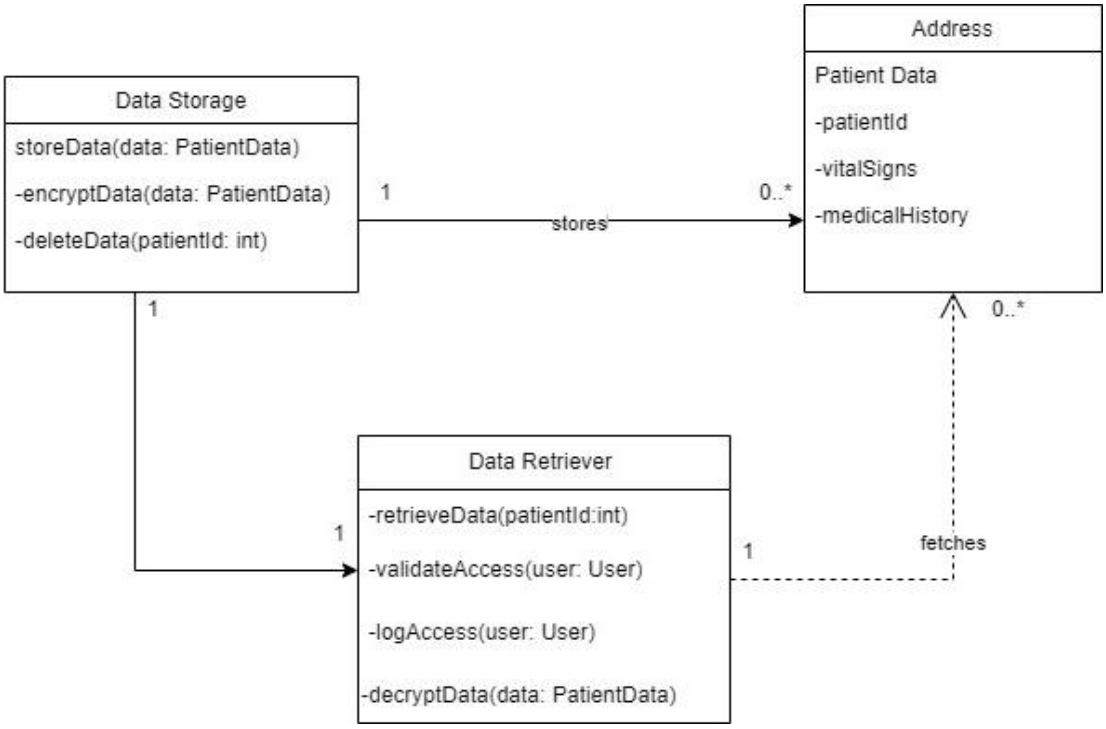
Alert Generation System:



Description:

In the Alert Generation System's UML diagram, the arrows represent crucial relationships and interactions between classes, enhancing the system's functionality and coherence. At its core, the AlertGenerator includes three methods. Their functionality is to receive real-time data streams from monitoring devices, analyzing them against personalized alert thresholds stored in the PatientProfile class. When a threshold is breached, an instance of the Alert class is instantiated, capturing essential details such as patient ID, alert type, and timestamp. This composition relationship between AlertGenerator and Alert signifies the AlertGenerator's responsibility for generating alerts based on analyzed data. Subsequently, the AlertManager takes charge of managing the lifecycle of alerts, organizing their dissemination to medical staff devices and workstations. Additionally, the association between Alert and AlertManager highlights how alerts are managed and distributed efficiently for timely interventions. Furthermore, the associations between Alert and PatientProfile, as well as PatientProfile and Threshold, illustrate how alerts are personalized based on individual patient profiles and their respective thresholds. Overall, these relationships contribute to a cohesive and efficient alert generation system within the cardiovascular ward, ensuring prompt responses to critical health events.

Data Storage System:



Description:

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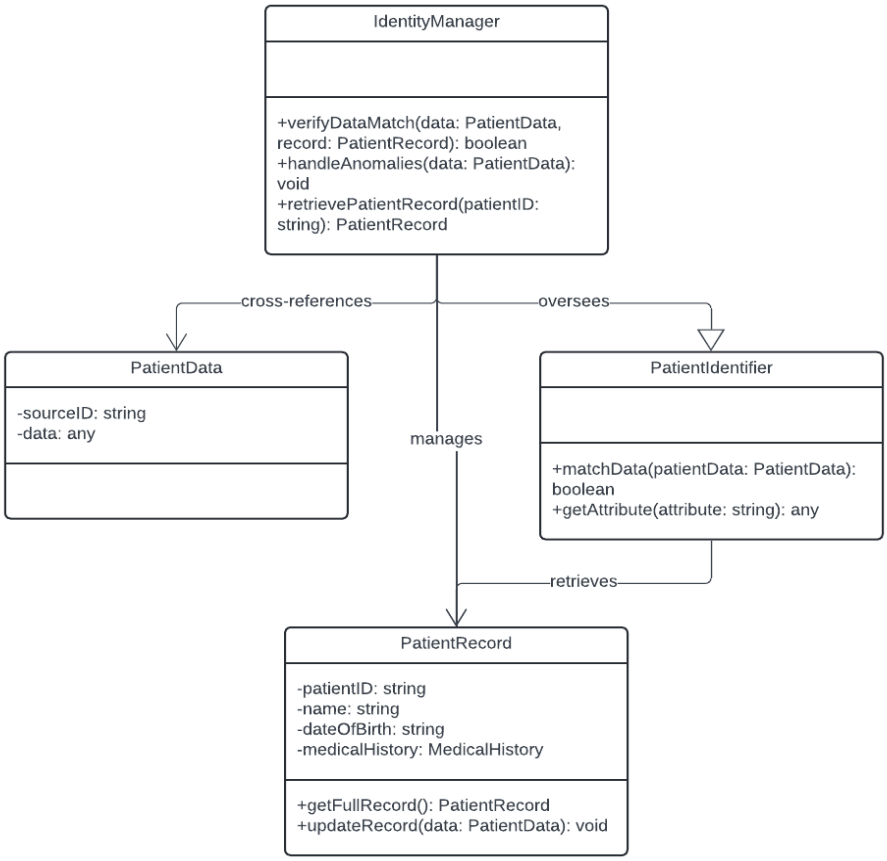
Patient Identification System:



Description:

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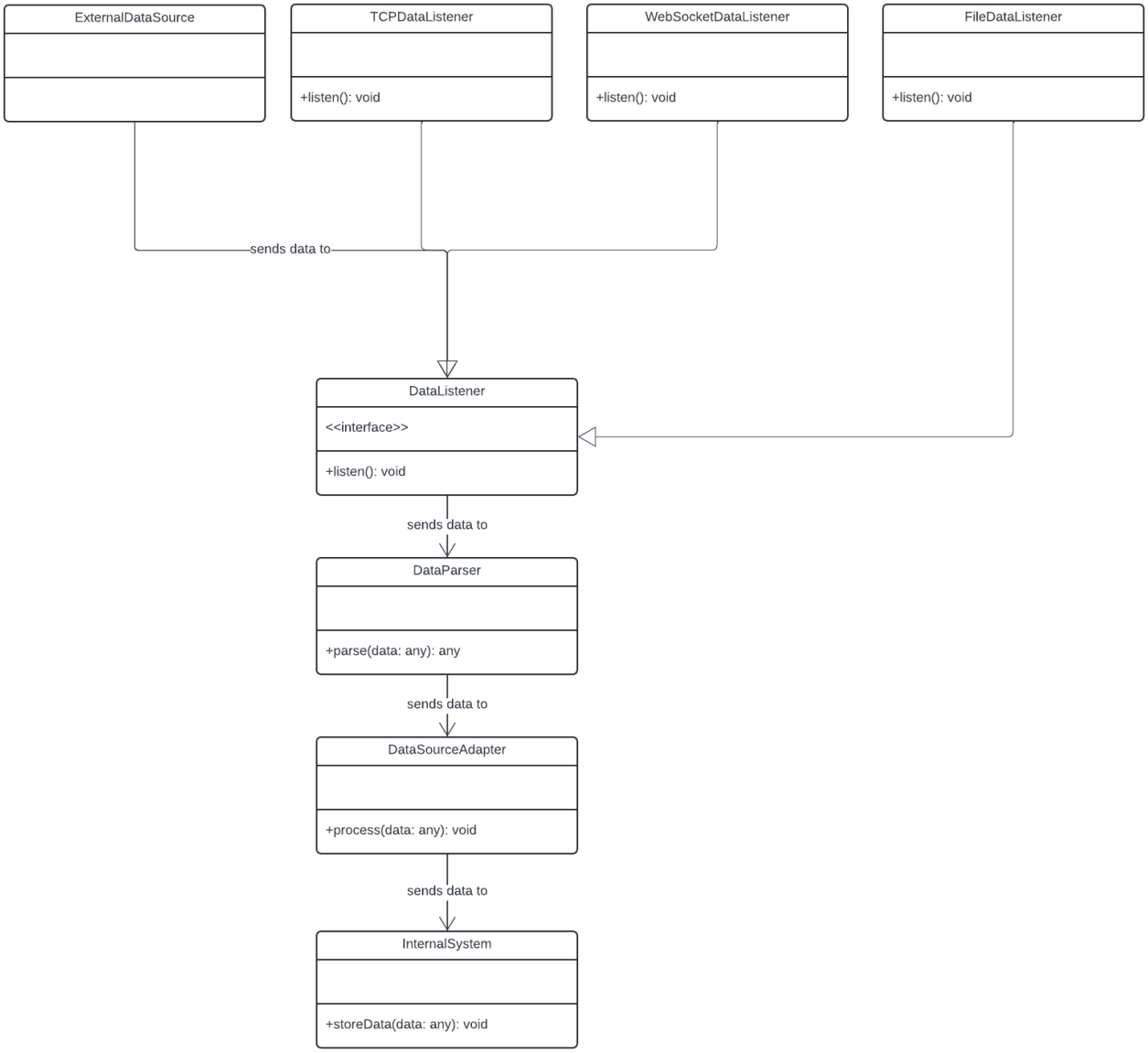
Data Access Layer



Description:

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State and Sequence Diagrams for the Alert Generation System