**Alert Generator System**

## AlertGenerator

- dataStorage: DataStorage

+ AlertGenerator(dataStorage: DataStorage)
+ evaluateData(patient: Patient)
+ triggerAlert(alert: Alert)

## Alert

- patientId: String
- condition: String
- timestamp: long

+ Alert(patientId: String, condition: String, timestamp: long): Alert
+ getPatientId(): String
+ getCondition(): String
+ getTimestamp(): long

## AlertManager

- patientId: String
- condition: String
- timestamp: long
- alerts: List<Alert>

+ Alert(patientId: String, condition: String, timestamp: long): Alert
+ addAlert(alerts: Alert): List<Alert>
+ sendAlert(alerts: List<Alert>): String

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This UML describes how the Alert Generator System works in the CHMS.

The main objective of this system is to monitor in real time the patient's vitals and trigger the correct alert when some vitals are critical. This increases a faster and adequate response of the medical staff by generating a highly accurate alert notification.

The system contains 3 classes, AlertGenerator, Alert and AlertManager.

AlertGenerator is the class responsible for continuously monitoring the data and continuously checking if the vitals are normal. It will evaluate each data to see if there is some alert to trigger.

When an alert is detected, the generated will trigger and he will generate an alert via the method AlertGenerator. This object alert contains all the data related to the patient, when the alert occurred, the priority level of alert and why the alert is generated. Once done, he will use triggerAlert to send the alert to AlertManger. AlertManager will add the alert to the list in order of the most critical alert first and notify the nurse. And after that, we send the alert to the adequate medical staff that needs to handle the situation.

So this UML show a responsive and efficient alert system for a Hospital.