

Assignment 2: Hospital Emergency Monitoring System

This one can be even more engaging.

Scenario

A hospital has a **patient monitoring process** and a **central monitoring process**.

Patient Monitor Process



Central Hospital Monitor

The patient-monitor process generates simulated patient information:

Patient_ID	Heart_Rate	SpO2	Temperature
101	78	98	36.7
102	125	88	39.2
103	72	97	36.5

It sends the information through:

/tmp/hospital_fifo

Process 1 — Patient Monitor

Generate a patient record every few seconds.

Example:

101 78 98 36.7
102 125 88 39.2
103 72 97 36.5

You can use random numbers to simulate sensors.

Process 2 — Central Monitor

The central process receives the information and determines the patient's status.

For example:

```
=====
CENTRAL PATIENT MONITOR
=====
Patient : 102
Heart Rate : 125
SpO2      : 88%
Temperature: 39.2 C
ALERT: CRITICAL CONDITION
=====
```

Define simple rules:

Heart Rate > 120 → HIGH HEART RATE
SpO2 < 90 → LOW OXYGEN
Temperature > 38.0 → HIGH TEMPERATURE
If any condition is detected:

***** ALERT *****

Patient 102 requires attention
