# **Railway Logic**

This system continuously monitors two real-time input signals:

1. Whether a train is approaching the railway junction
2. Whether a vehicle is present on the railway track

**System Logic**  
The system operates according to the following conditions:

**IF** a train is detected **OR** a vehicle is detected on the crossing,  
→ **THEN**:  
    • Lower the crossing gates  
    • If the warning lights are already ON, activate the audible alert

**IF** no train is detected **AND** no vehicle is on the track,  
→ **THEN**:  
    • Raise the gates  
    • Turn OFF the warning lights and the audible alert

This is not a system that uses information stored in the memory or the use of timers. It adapts to feedback on real-world input conditions with use of live inputs. All the gates will remain closed when either of the inputs signal danger and it will only open when both inputs indicate it is safe. This reasoning ensures maximum safety, eliminates human error, and provides the system with the ability to respond adequately to the changing real-life conditions without any human intervention.

## **FLOWCHART**

