**Project Proposal- Chemical Alarm System**

**Digital Logic Design (EE-227)**

**Mrs. Farrah Munir**

**Project Proposed By:**

Muhammad Fahad Khawaja – 19L-1244

Zara Babar – 19L-0966

**Project Overview**

A chemical alarm system controller is required to be designed for a chemical factory. The factory creates chemicals that need optimum pH, temperature and pressure conditions. The alarm system will trigger an alarm if either of the quantities fall below a preset value.

**Project Objectives**

* To design the digital logic for a chemical alarm system
* Implement the chemical alarm system
* To demonstrate the working of a chemical alarm system

**Proposed Design**

The proposed chemical alarm is a monitoring system, which will work on three inputs, namely pH, temperature and pressure. This alarm system will have a timing feature. The current input readings will then be compared with the preset value. If a quantity falls below the preset value or goes above the preset value it will trigger a specific alarm, the operator can then take the necessary actions. A sequential counter will be incorporated to keep track of the number of discrepancies in a single shift.

The alarm system will be designed using a combinational circuit that will incorporate a clock/timer. Comparator circuits will be incorporated to compare the current values with preset values. A buzzer/bulb will go on when an input value is not equal to the pre-set value. The counter will keep track of the number of times any alarm goes off.

This is just an overview of how the entire project is planned to be, changes may be done to the initial proposal as required.

A screenshot of a social media post

Description automatically generated