Project Design Phase-I

Solution Architecture

Date	October 2022
Team ID	PNT2022TMID27112
Project Name	Gas Leakage Monitoring and Alerting System for Industries
Maximum Marks	4 Marks

Solution Architecture:

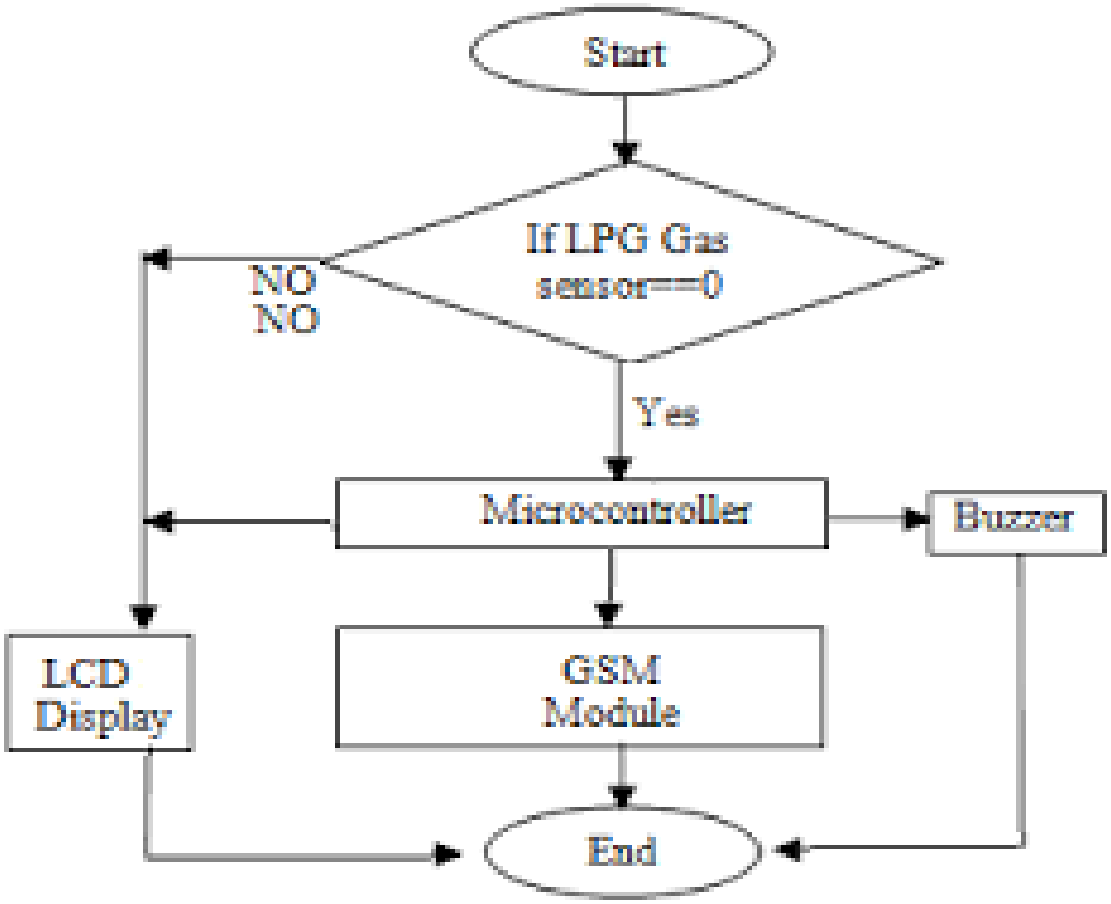
Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behaviour, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed and delivered.

The key features of solution architecture are :

- Analyzing the technology environment.
- Analyzing enterprise specifics·
- Analyzing and documenting requirements.
- Setting the collaboration framework.
- Participating in technology selection

BLOCK DIAGRAM



- LCD (Liquid Crystal Display) is **a type of flat panel display which uses liquid crystals in its primary form of operation**.
- LEDs have a large and varying set of use cases for consumers and businesses, as they can be commonly found in smartphones, televisions, computer monitors and instrument panels. A microcontroller is **a compact integrated circuit designed to govern a specific operation in an embedded system**.
- A typical microcontroller includes a processor, memory and input/output (I/O) peripherals on a single chip.
- A microcontroller contains one or more CPUs along with memory and programmable input/output peripherals microcontroller is a small computer on a single VLSI integrated circuit chip.

- **A customised Global System for Mobile communication** (GSM) module is designed for wireless radiation monitoring through Short Messaging Service (SMS).
- This module is able to receive serial data from radiation monitoring devices such as survey meter or area monitor and transmit the data as text SMS to a host server