Chapter 4:-SYSTEM ANALYSIS

4.1 Study of current system:

In the existing system we cannot find any security for LPG cylinder in kitchen for any lick of gas or no notification of gas cylinder weight ,gas booking process is done manually by calling to the customer care of the gas ,not concept of getting SMS notification of any Cylinder over android app in existing system.

4.2 Problem and weakness of current system:

The phase of system analysis process deals with problems which are affecting in the current manual system. The problem are those which are affecting in the current manual system. The system in their daily routine work.

As the growing trend in InfoTech World of computers need of accuracy, reliability, speed and high memory data storage is a must. Each and every problem must be solved with a least amount of time and energy.

The problems faced by existing system are described as below:

No LPG gas leak detection :

In common scenarios in our house there is not any system is available to sense the leakage of lpg gas so when the small amount of gas leaks occurs if we can't sense it and sometimes it can cause any harm.

Not knowing amount of gas present in the cylinder:

Due to which it becomes difficult to predict at which time we have to book the next cylinder.

Booking the cylinder manually:

we have to book the cylinder manually by giving the miscall ,or either using SMS/Whatsapp

or by IVRS system it cannot automatically book the cylinder when the amount of gas is going to get over.

4.3 Requirements of new system:

1) **Non-Functional Description:**

Quality Requirements:-

The quality in software development process is by periodic reviews documentation and verification at all appropriate stages. Software engineering standards should be followed throughout the development process. The quality in software product is ensuring by embedding fooling quality attribute in the software package:

Readability:

Appropriate comments in the project source code will be provided for readability so that the user can easily read and understand the project if need be. So the project will be helpful for interested person. The application should be functionally correct as a wrong output of query has no significance. Reliability is a must in the application to make it worth for the employees. A great degree of care has to be taken to ensure minimum/zero defects in the code.

Modularity:

The will be divided into different modules so as to provide easy understanding and debugging of the system.

Modifiability:

With the help of modularity and readability of the source code of the program the system will be easy to modify in the future as and when needed.

Portability:

The project will be easy to implement on the client system which satisfy the minimum hardware requirement.

Easy to use:

This project will be easy to use and so shall incorporate self-explanatory GUI.

Maintainability:

This project will provide easy maintenance of the well data. When application is used, it has to be maintained. There could be additional requirements in terms of added functionality or feature. As the application is not to be maintained by the develpoers, the code should be less complex such that it can be easily understandable by the relevant person for modification.

Fault Tolerance/Error Reporting:

Since the application will be used by user and by developers it might be possible that operation might result into errors. The application should provide the user friendly eror message and fault tolerance facility whenever any error occurs.

2. Non-Functional description:

Different functions provided by the system are:

Login:

The main use of this process that in which if user enter its name and password then he/she can show capuche code, the purpose of this function is to provide security against those devotees who have not do registration and want to login in scrapbook site.

Registration process:

In this process user can register and get username for access the user. Then user enter into the scrapbook.

4.4 Feasibility Study:

Preliminary investigation examine project feasibility, the likelihood the system will be useful to the organization. The main objectives of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

- Economic Feasibility
- Technical Feasibility
- Legal Feasibility
- Scheduled Feasibility
- Operational Feasibility

As it is not live project. We do not have economical and legal issues. Other types of feasibility studies are as below:

Technical Feasibility:

The technical issue usually raised during the feasibility stage of the investigation includes the following:

- Does the necessary technology exist to do what is suggested?
- Do the proposed equipments have the technical capacity to hold the data required to use the new system?

- Will the proposed system provide adequate response to inquiries, regardless of the number or location of users?
- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Operational Feasibility:

System is best its performance and provides adequate throughput and response time.

- Performance:- System is best at its performance to provide adequate throughput and response time.
- Information:- System provides end-user with timely, pertinent, accurate, and usefully formatted information.
- Control:- System protects against fraud and embezzlement and to guarantee the accuracy and security of data and information.
- Efficiency:- System make maximum use of available resources including people. Time flow of form and minimum processing delays.
- Services:- System provides desirable and reliable service to those who need it. It is flexible and expandable.

Schedule Feasibility:

Another thing to be considered during the feasibility study is the time limit: 3 to 4. Again the main concern for us was any unexpected problems that the VS module might present to us: The part regarding Visual Basic was clearly laid out. and so it was relatively easier for us to, make out an approximate break-up of the number of days that would take. In the end, we thought that the amount of time in hand after the VS section was completed would be sufficient for completion of the more challenging part.

Economical Feasibility:

- Economic feasibility looks at the financial aspects of the project. Economical feasibility concerns with the returns from the investments in a project. It determines whether it is worthwhile to invest the money in the proposed system. It is not worthwhile spending a lot of money on a project for no returns.

- To carry out an economic feasibility for a system, it is necessary to place actual money value against any activities needed to implement the project.
- The company payroll system plans to acquire the necessary hardware and software require for the system and there is no hindrance whather economical or otherwise towards its purchase.

4.5 Data Modeling

The information flow defined as part of business modeling phase is refined into a set of data objects that are needed to support the business. The characteristics of each object is identified and the relationship between these objects are defined.

4.5.1 DFD Diagram

i) Context Diagram

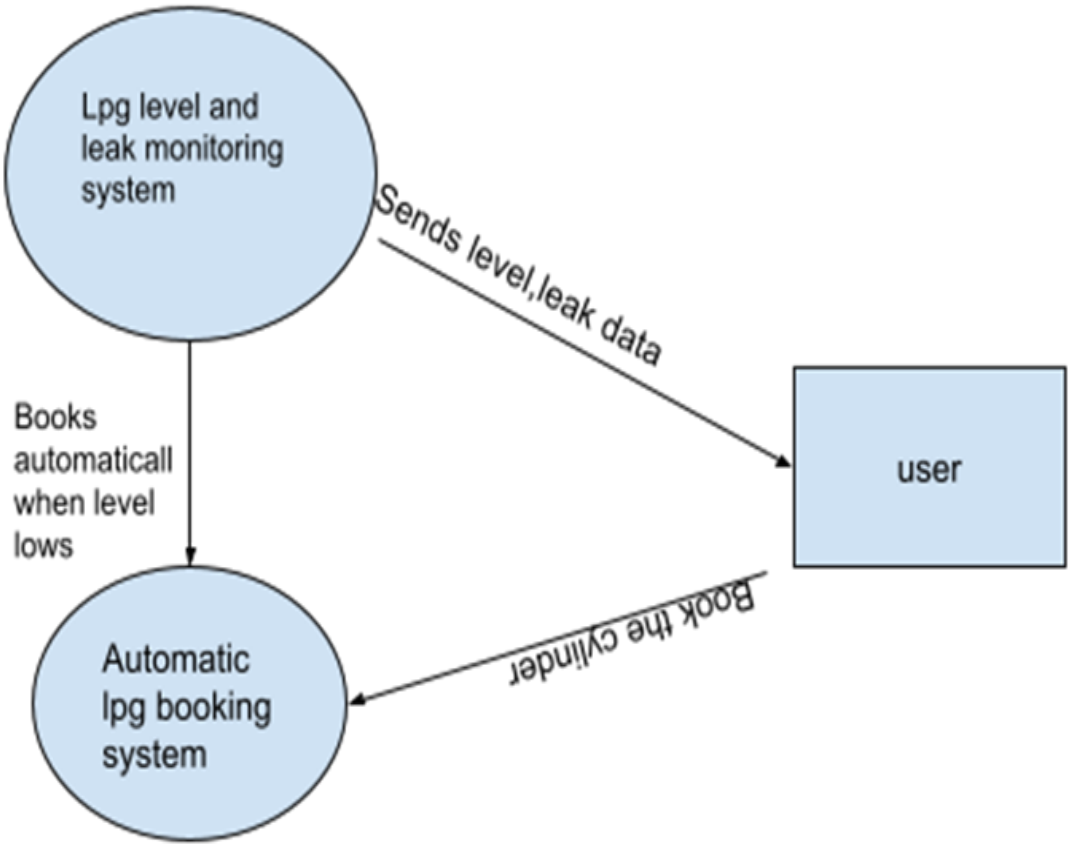

Figure 18: DFD (context level) Diagram

ii) DFD Level 1

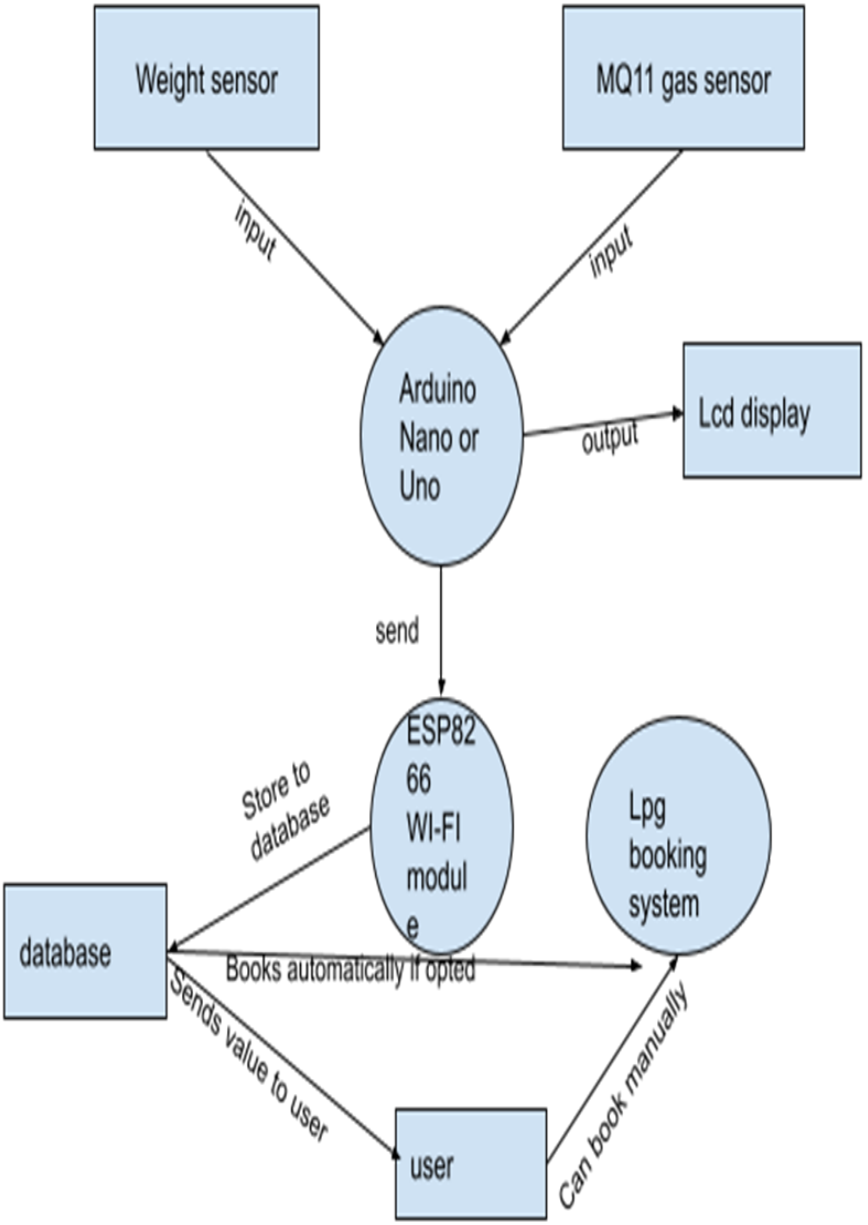

Figure 19: DFD (Level 1) Diagram

4.5.2 ER Diagram

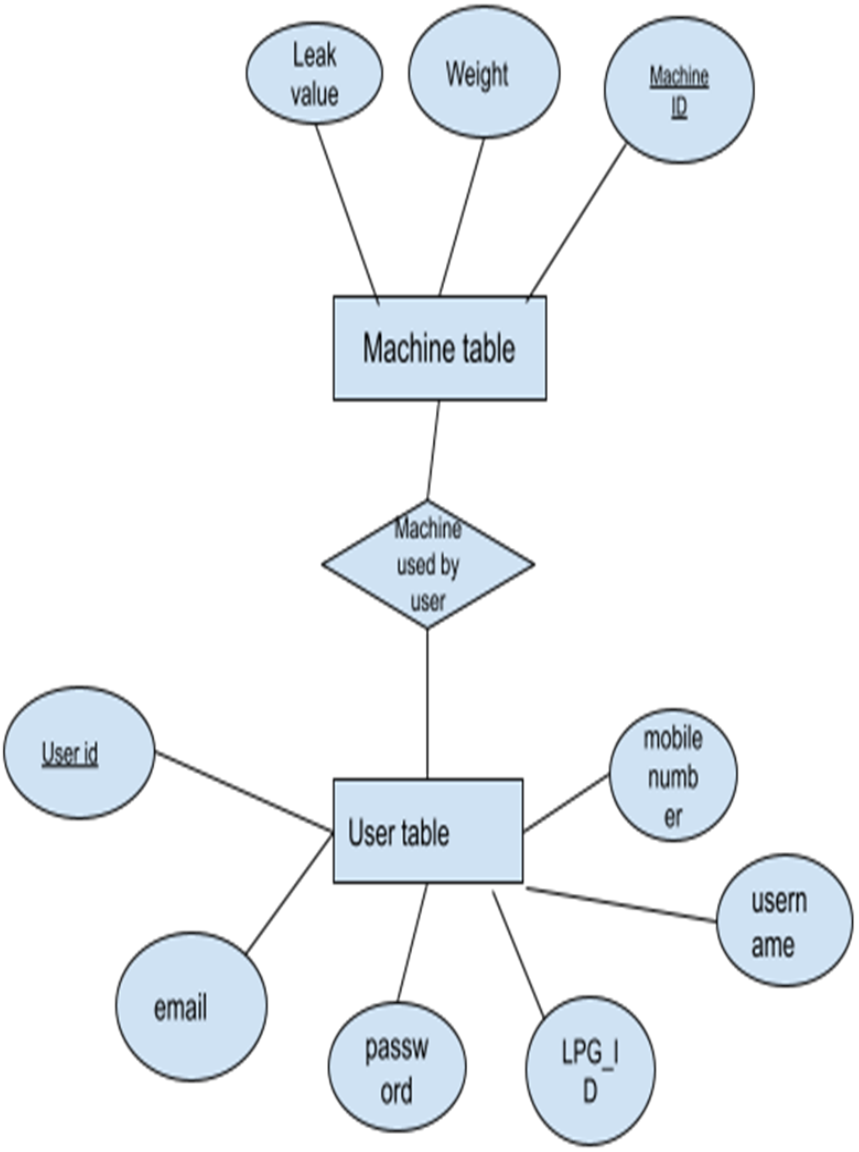

Figure 20: ER Diagram

4.5.3 Use Case Diagram

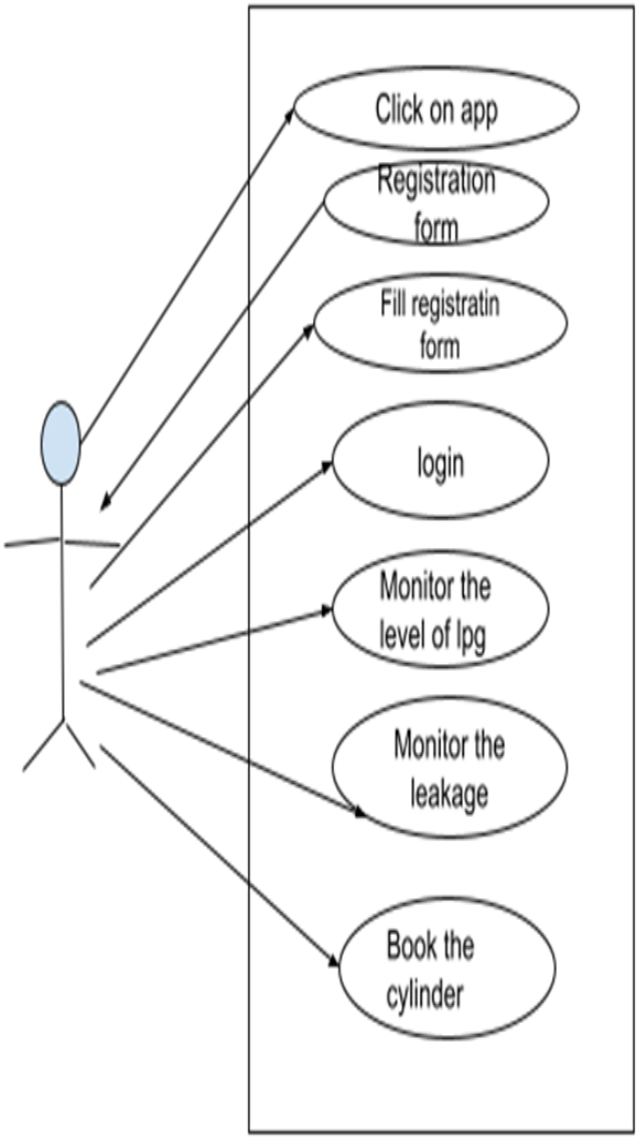

Figure 21:Usecase diagram

4.5.4 Flow Chart

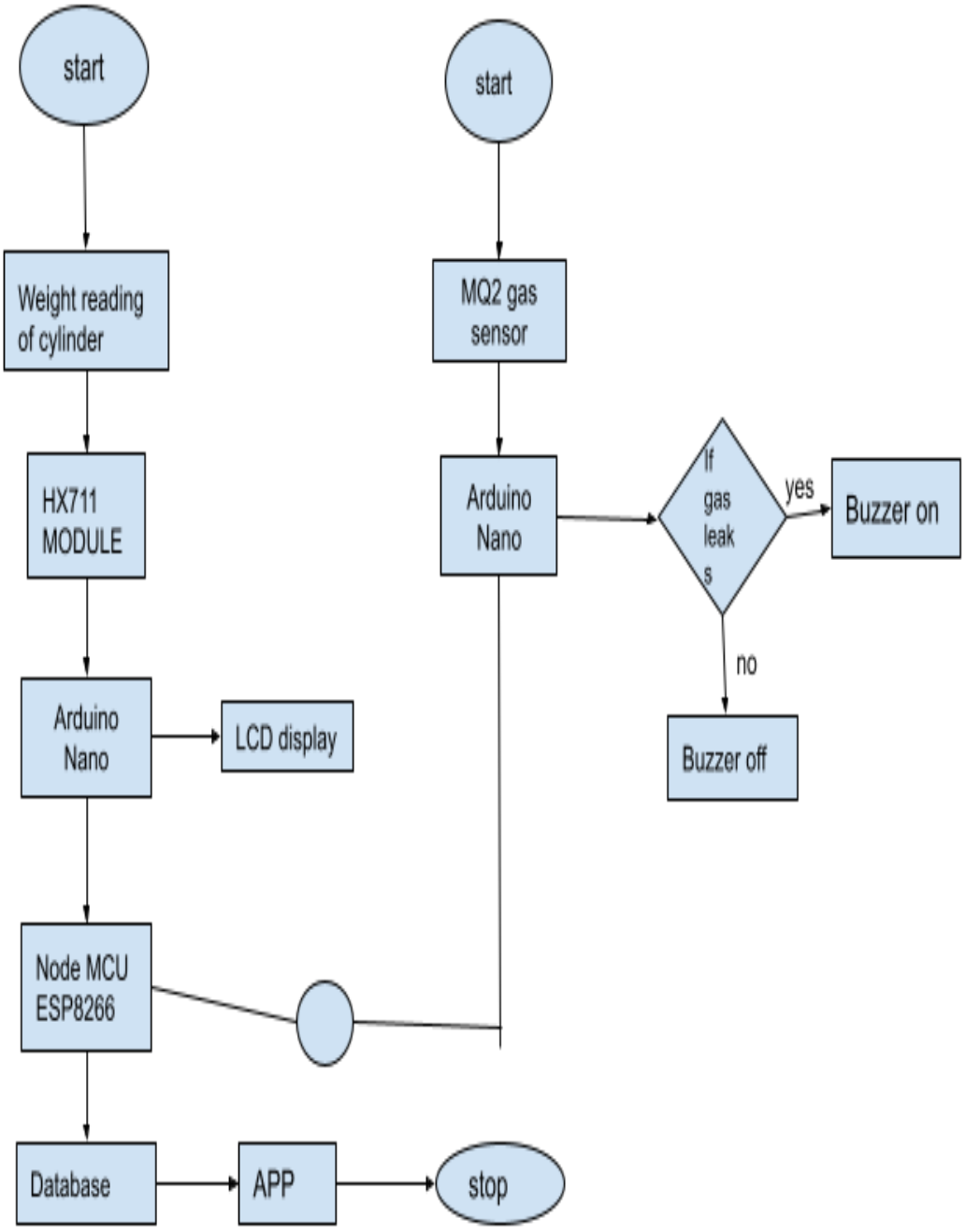

Figure 22: Flow Chart

4.5.5 Block Diagram

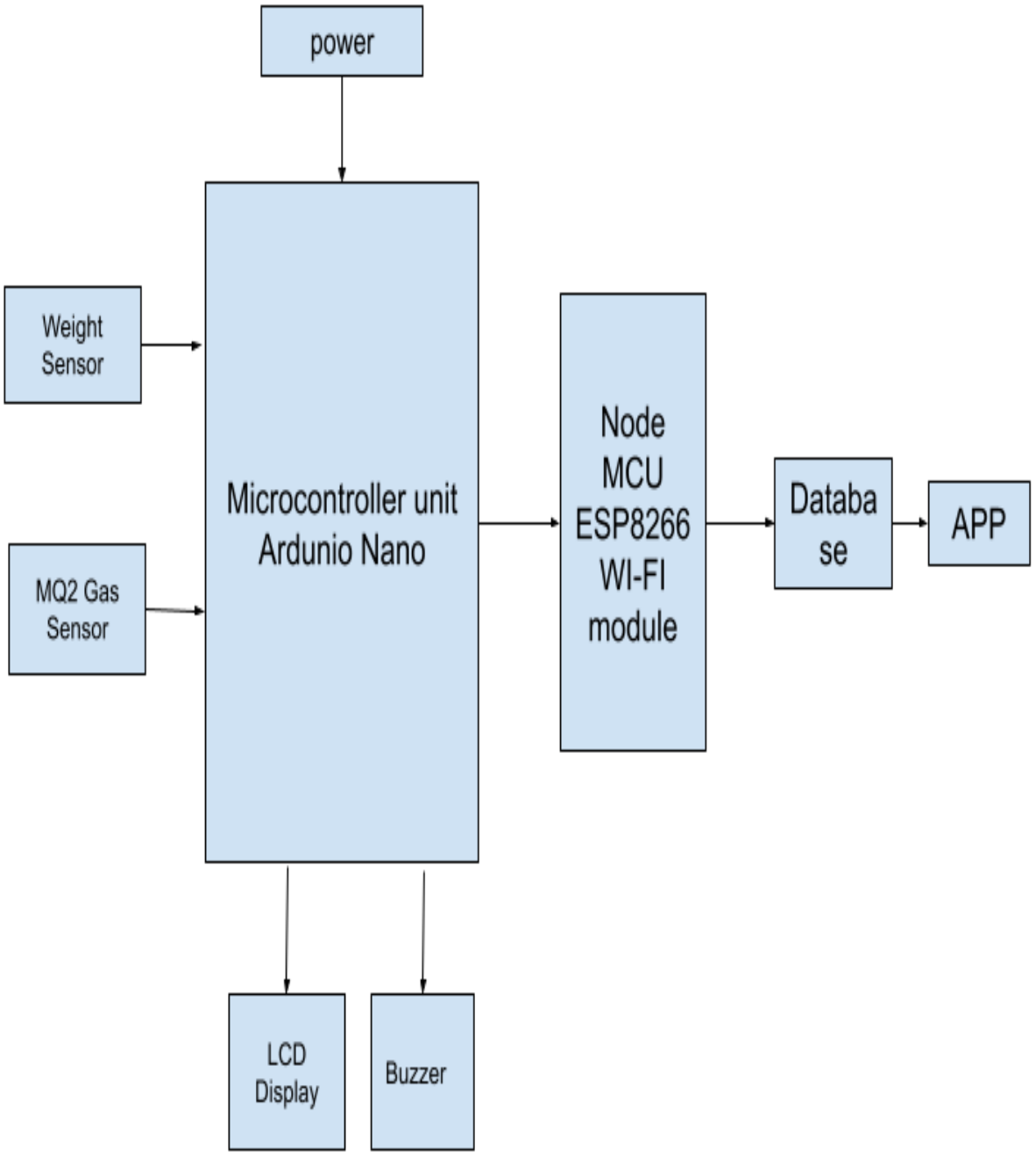

Figure 23:Block Diagram

4.5.6 Circuit Diagram