



SMART FOOD MONITORING SYSTEM





Abstract

- In the era of technology advancement, everything requires monitoring and controlling. A framework for facilitating food monitoring for protection of the food, so that it would not get contaminated.
- In present scenario, the work done is in terms of the sensed value that have been recorded and a detailed analysis has been performed but automated controlled alternatives are not present.
- The proposed solution analyzes temperature, moisture, light as these parameters affect nutritional values of food items such as fruits and vegetables.



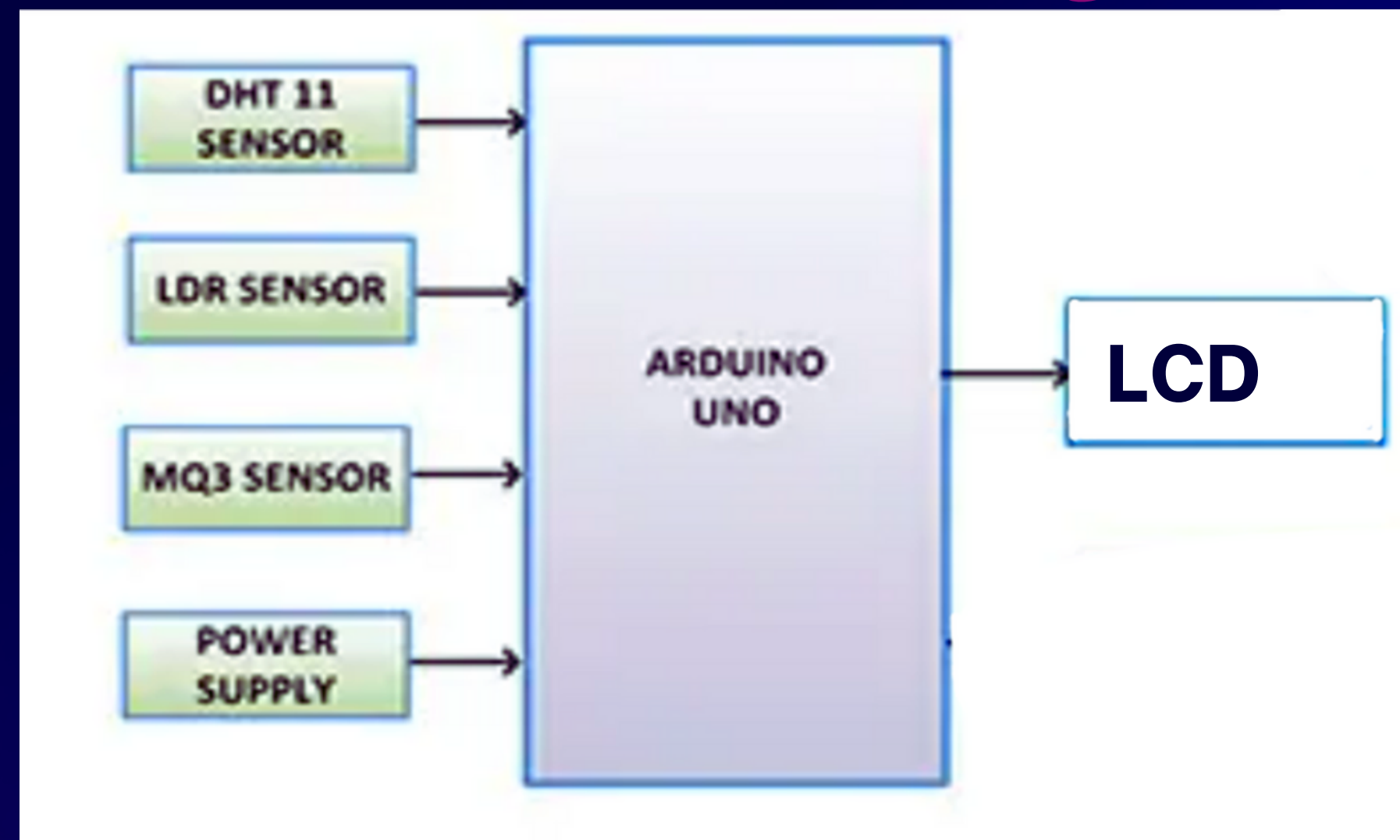
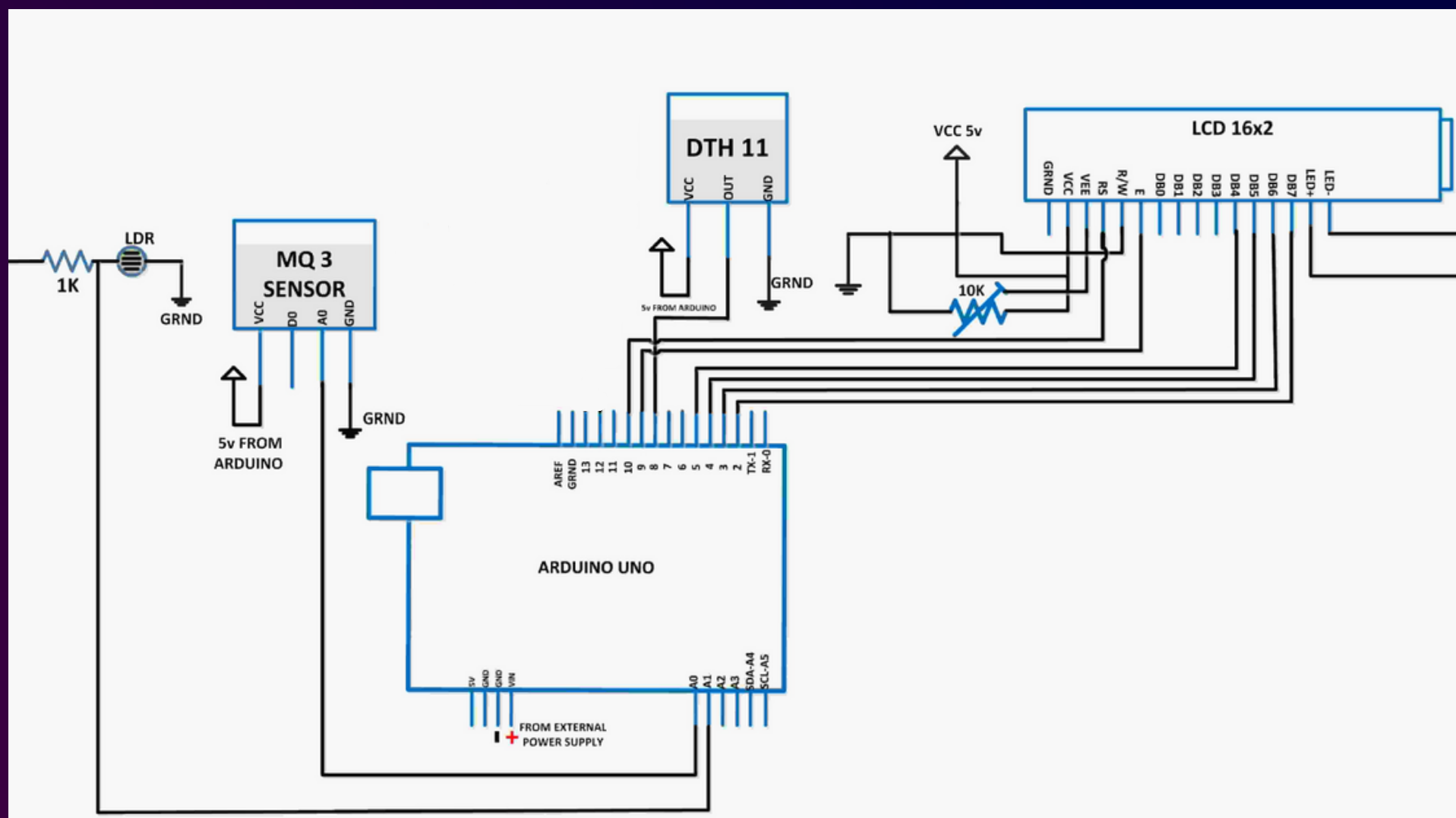
Problem Statement

- To ensure food safety it should be monitored at every stage of supply chain. It serves the purpose of preventive consumer health protection by maintaining the required standard ambient conditions needed to preserve the quality of food.
- The performance and analysis of routine measurements, aimed at detecting changes in the nutritional or health status of the food doesn't guarantee that.
- Information collected through monitoring and surveillance must be analyzed and transmitted to decision-makers in an appropriate format and in a timely fashion if it is to be of real value.
- Thus, Integration of the sensors with remote web server for data logging and a software application which allows distribution of data log as well alert messages is the need of the hour.

Introduction

- Food safety and hygiene is a major concern in order to prevent food wastage. The quality of food needs to be monitored and it must be prevented from routing and decaying atmospheric factors like temperature, humidity and darkness Therefore, it is useful to deploy quality monitoring devices at food stores.
- These quality monitoring devices keep a watch on the environmental factors that cause or pace up decay of the food. Later, the environmental factors can be controlled like by refrigeration, vacuum storage etc.,
- A food contamination can occur in the production process, but also a large part caused by the inefficient food handling because of inappropriate ambient conditions when the food is being transported and stored.
- There are many factors leading to food poisoning, typically changes in temperature and humidity are important factors. The job of this control and monitoring systems is to keep an eye on particular things or activity and to make sure that it stays in the desired manner.

Project Contents



Proposed System & Block or Circuit diagram or Flow Chart

- A system has been proposed to analyze the ambient conditions under which the food item is being stored and transported. The proposed solution senses the temperature, moisture, light parameters of surrounding environment as these parameters affect nutritional values of food items.
- In general, we mostly find the relative temperature, moisture from the food by using DHT11 and we sense methane or alcohol gas content emitting from food by using an MQ3 sensor.
- This output from the food sensing arrangement is given to the analogue input pin of the microcontroller. The microcontroller continuously monitors the analogue input pin. The output values are compared with prioritized and fixed values if the moisture, temperate in the food is above the threshold, the microcontroller displays a message mentioning the same and the motor is turned on if the temperature is high.

Application

1. Save fruits and vegetables for longer time.
2. Maintain hygiene and clean environment.

Advantages

1. Can use this system in fruits and vegetable shops.
2. Can use this system in agriculture farm.

THANK YOU