**GREEN HOUSE MONITORING AND CONTROL**

**ABSTRACT:**

Monitoring and control of greenhouse environment play an important role in greenhouse production and management. To monitor the greenhouse environment parameters effectively, it is necessary to design a measurement and control system. The objective of this project is to design a simple, easy to install, microcontroller-based circuit to monitor and record the values of temperature, humidity, soil moisture and sunlight of the natural environment that are continuously modified and controlled in order optimize them to achieve maximum plant growth and yield. The controller used is a low power, cost efficient chip manufactured by ATMEL having 8K bytes of on-chip flash memory.



**Block diagram**

It communicates with the various sensor modules in real-time in order to control the light, aeration and drainage process efficiently inside a greenhouse by actuating a cooler, fogger, dripper and lights respectively according to the necessary condition of the crops. An integrated Liquid crystal display (LCD) is also used for real time display of data acquired from the various sensors and the status of the various devices. Also, the use of easily available components reduces the manufacturing and maintenance costs. The design is quite flexible as the software can be changed any time. It can thus be tailor-made to the specific requirements of the user. This makes the proposed system to be an economical, portable and a low maintenance solution for greenhouse applications, especially in rural areas and for small scale agriculturists.