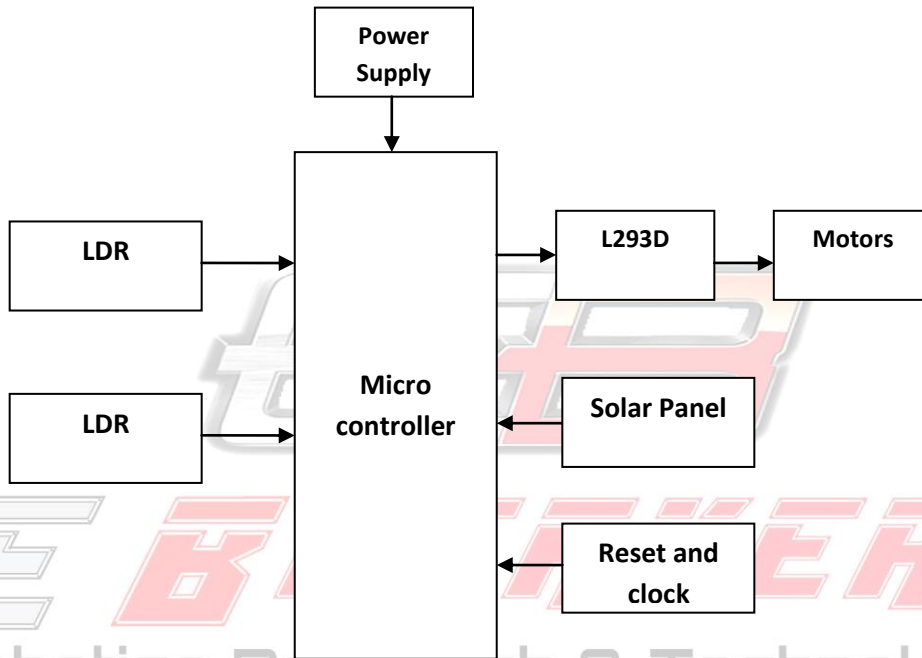


# AN INTELLIGENT SOLAR TRACKING SYSTEM USING 8051 MICROCONTROLLER

## Description:

Solar energy is becoming increasingly attractive as we grapple with global climate changes. However, while solar energy is free, non-polluting, and inexhaustible, solar panels are fixed. As such, they cannot take advantage of maximum sunlight as weather conditions and seasons change. A solar panel receives the most sunlight when it is perpendicular to the sun's rays, but the sunlight direction changes regularly with changing seasons and weather. Currently, most solar panels are fixed, i.e., the solar array has a fixed orientation to the sky and does not turn to follow the sun. To increase the unit area illumination of sunlight on solar panels, we designed a solar tracking electricity generation system. The design mechanism holds the solar panel and allows the panel to perform an approximate 3-dimensional (3-D) hemispheroidal rotation to track the sun's movement during the day and improve the overall electricity generation. This system can achieve the maximum illumination and energy concentration and cut the cost of electricity by requiring fewer solar panels, therefore, it has great significance for research and development. The main use of this report is to utilize the maximum power from the sun. Now a day we are in heavy need to use the solar power as in the coming days everything we use might depend on this kind of systems.

**Block diagram:**



**Hardware requirements:**

1. Micro Controller
2. LDR
3. L293d
4. Motors
5. Solar panel

**Software requirements:**

1. Keil software
2. Embedded c

