**SOLAR PANEL CONTROL SYSTEM**

 **(Solar Tracker that rotates in the direction of Light)**

This project is an automated system where Solar Panel direction is controlled based on the light falling on the LDR based light sensors.

In the proposed project we will be using a couple of LDR sensors, which will be detecting the light falling on them. These sensors are connected besides the Solar Panels. Please note that there will not be any Solar Panels but the support base for the panels will be demonstrated. These panels will be fixed on DC Servo motors. The DC motors will move towards the direction of maximum sun energy. The signals from the light sensing device will be trigger the movement of the panel. The signals from the light sensing device will be processed by the microcontroller and the microcontroller drive the DC Servo motor in the desired direction.

 An 8-bit the microcontroller is used for this purpose. The programing of this microcontroller is done using Embedded C programs and to cross compile the .c file into hex. The programing of hex file into microcontroller done using PICKIT2 programmer.

**Major Hardware Components Used**

1. Microcontroller
2. Regulated Power Supply
3. LDR for Light sensing
4. DC Servo Motor and Drive.
5. Power Supply.
6. LED Indicators

**Software Used**

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.

**BLOCK DIAGRAM**

**Regulated Power Supply:**

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