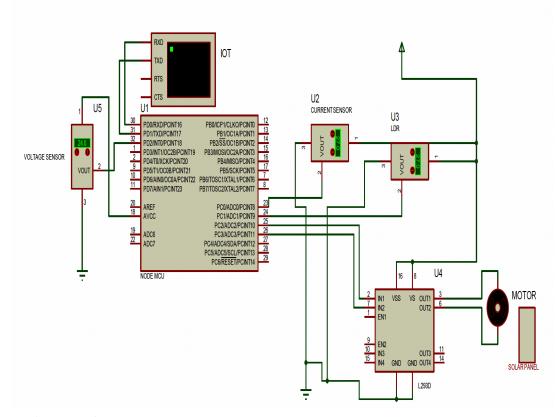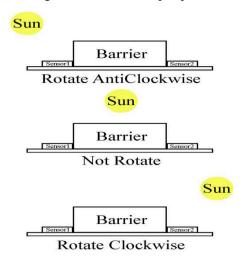# DESIGN AND IMPLEMENTATION

In the entire process, NODEMCU plays a major role. It acts as an interface between sensors and the user's mobile and is also involved in the tracking of solar panels. The main function of the system is to monitor and track the solar panels and obtain maximum power output from the panels.

1. Tracking

Tracking of solar panels is done to obtain maximum intensity of sunlight throughout the day. This improves the efficiency of solar panels by increasing the output power generation of solar panels. Tracking also increases output power during shading.

2. **Monitoring**

   Monitoring of solar panels is done using IoT, from which solar panel data (output) can be obtained on mobile or laptop through the internet.

   IoT Ecosystem:
   1. Sensor Data: Smart plugs (transducers and Sensors Modules)
   2. Gateway (WIFI Modules)
   3. Cloud Services (that will help individual users to post and retrieve sensor data)